Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Permittee Name: **Dow Corning Corporation**
Mailing Address: **ATTN: Mr. Michael Nevin**
P.O. Box 310
Carrollton, Kentucky 41008

is authorized to operate a silicone-based synthetic organic chemicals manufacturing plant

Facility Name: **Dow Corning Corporation**
Mailing Address: **Same as above**
Facility Location: **4770 US Highway 42**
Carrollton, Kentucky 41008

Region: **Florence**
County: **Carroll**

Facility ID #: **079-0580-0004**
FINDS Number: **KYD042943985**
SIC Code: **2821 (Primary), 2869 (Secondary)**

PERMIT TYPE: **Federally-Enforceable Title V Operating Permit**
Review Type: **Title V, Early Reductions, NSR, NSPS, MACT**
Permit Number: **V-97-035**
Log Number: **E805**

Issuance Date: **December 16, 1997**
Expiration Date: **Upon issuance of Final Permit**

John E. Hornback, Director
Division for Air Quality

DEP7001 (1-97)

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be administratively and technically complete on February 14, 1997, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This proposed permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto and shall become the final permit unless the U.S. EPA files an objection pursuant to Regulation 401 KAR 50:035, Section 21(3).

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. However, these provisions do not shield the source from violations of the applicable requirements being established and documented through other evidence, nor does it relieve the source from its obligation to comply with the underlying emission limits or other applicable requirements being monitored.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS - CONTENTS

Section B consists of the following subsections:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS:

EIS No.	Dow Vent ID	Boiler ID	Make/Model	Date installed	Maximum Rated Capacity (Fuels used)
	U.01	703	Zurn Eric City, #22M Keystone Model SAOH-MJ-DAR-36	09/01/87	176.8 mmBTU/hr (Natural Gas) 167.1 mmBTU/hr (Fuel Oil #2, #6)
	U.02	766	Zurn Package Water Tube Boiler	11/01/90	97.0 mmBTU/hr (Natural Gas, Fuel Oil #2)
	U.03	600	Combustion Eng., Inc.	1966	58.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.04	601	Combustion Eng., Inc.	1966	58.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.05	657	Riley Type PS-23-57	1970	60.0 mmBTU/hr (Natural Gas, Fuel Oil #6)
	U.11	767	Nebraska Model NSX-G-117	01/01/96 12/01/97 (Proposed)	179.25 mmBTU/hr (Natural Gas) 179.25 mmBTU/hr (Fuel Oil #2)

APPLICABLE REGULATIONS:

a. For the 703 Boiler :
Regulation 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.

b. For the 766 Boiler:
Regulation 401 KAR 51:017 (40 CFR 52.21) applies to the particulate, sulfur dioxide, nitrogen oxide and visible emissions.
Regulation 401 KAR 60:043 (40 CFR 60 Subpart Dc) applies to the particulate and sulfur dioxide emissions.

c. For the 767 Boiler:
Regulation 401 KAR 60:042 (40 CFR 60 Subpart Db) applies to the sulfur dioxide, nitrogen oxides, and visible emissions.
Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

d. For the 600, 601 and 657 Boilers:
Regulation 401 KAR 61:015 applies to the particulate, sulfur dioxide and visible emissions.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

1. Operating Limitations:

a. For the 703 Boiler:
   i. The maximum rated heat input while firing natural gas shall not exceed 175.2 mmBTU/hr.
   ii. The maximum rated heat input while firing fuel oil #6 shall not exceed 167.1 mmBTU/hr.

b. For the 766 Boiler: The maximum rated heat input shall not exceed 97.0 mmBTU/hr.

c. For the 767 Boiler: The fuel oil #2 usage rate shall not exceed 550 hours per year (12-month rolling period).

Compliance Demonstration Methods:

a. The permittee shall keep a daily record of the amounts of each type of fuel combusted during each day and the hours of operation of the 703, 766 and 767 Boilers.

b. The heat input calculated by the formula below shall be compared with the heat input limit to determine compliance for the 703 and 767 boilers:

Heat Input = [Monthly fuel usage rate] x [Fuel Heating Value] / [Monthly Hours of Operation]

2. Emission Limitations:

(a) For the 703 Boiler, pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i For natural gas combustion:
      a. Emissions of particulate matter shall not exceed 0.1 lb/mmBTU.
      b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU.
      c. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU.
      d. The opacity of visible emissions shall not exceed 20%.
   ii. For fuel oil #2 and #6 combustion:
      a. Emissions of particulate matter shall not exceed 0.1 lb/mmBTU.
      b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU.
      c. The sulfur content of the fuel oils shall not exceed 0.75 percent by weight.
      d. Emissions of nitrogen oxides shall not exceed 0.4 lb/mmBTU.
      e. The opacity of visible emissions shall not exceed 20%.

(b) For the 766 Boiler, pursuant to Regulation 401 KAR 51:017, Section 9 (3):
   i. For natural gas combustion:
      a. Emissions of particulate matter shall not exceed 0.015 lb/mmBTU.
      b. Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBTU.
      c. Emissions of nitrogen oxides shall not exceed 0.1 lb/mmBTU.
      d. The opacity of visible emission shall not exceed 20%.
   ii. For fuel oil #2 combustion:
      a. Emissions of particulate matter shall not exceed 0.015 lb/mmBTU.
      b. Emissions of sulfur dioxide shall not exceed 0.5 lb/mmBTU; or
      Pursuant to Regulation 40 CFR 60.42c (d), the sulfur content of the oil shall not exceed 0.5 percent by weight.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

(b) ii. c. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU.
d. The opacity of visible emissions shall not exceed 20%.

(c) For the 600 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:
i. Emissions of particulate matter shall not exceed 0.35 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 4.63 lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

(d) For the 601 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:
i. Emissions of particulate matter shall not exceed 0.30 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 4.32 lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

(e) For the 657 Boiler, pursuant to Regulation 401 KAR 61:015, Sections 4 and 5, for natural gas or fuel oil #6 combustion:
i. Emissions of particulate matter shall not exceed 0.27 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 4.09 lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

(f) For the 767 Boiler,
i. For natural gas combustion:
a. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU [401 KAR 60:042 (40 CFR 60.44b (a))].
b. Emission of particulate matter shall not exceed 0.1 lb/mmBTU [401 KAR 59:015, Section 4 (1)(b)].
c. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU [401 KAR 59:015, Section 5 (1)(b)].
d. The opacity of visible emission shall not exceed 20% [401 KAR 59:015, Section 4 (2)].
ii. For fuel oil #2 combustion:
a. Emissions of particulate matter shall not exceed 0.10 lb/mmBTU [401 KAR 59:015, Section 4 (1)(b)].
b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBTU [40 CFR 60.42b (a)] and the sulfur content of the fuel oil shall not exceed 0.5 percent by weight [40 CFR 60.42b (j)].
c. Emissions of nitrogen oxides shall not exceed 0.2 lb/mmBTU [40 CFR 60.44b (a)].
d. The opacity of visible emissions shall not exceed 20% (6-minute average) [40 CFR 60.43b (f)].
iii. For natural gas and fuel oil #2 combined:
Emissions of nitrogen dioxides shall not exceed 39.5 tons per year (12-month rolling period).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

Compliance Demonstration Methods:

a. For sulfur content limits:

The permittee shall demonstrate compliance with the sulfur content limits through either: i. Fuel oil sampling - the oil in each fuel oil tank shall be sampled after each new shipment of oil is received as described in 40 CFR 60.46c (d)(2); or

ii. Fuel oil supplier certification - the permittee shall maintain fuel oil receipts as specified in 40 CFR 60.49b (r).

b. For the emission standards for nitrogen oxides, particulate matter and sulfur dioxide:

i. Compliance with the emission standards shall be demonstrated through performance testing using Reference Methods specified in Regulation 401 KAR 50:015. Performance testing shall be conducted on all boilers in the 12-month period immediately preceding the date of expiration of this permit.

ii. For compliance with the nitrogen oxide standards and annual emission limits for the 767 boiler (U.11), see **Section 4. Specific Monitoring Requirements.**

c. For visible emissions:

For each boiler, the permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** during all periods except as provided by 401 KAR 50:055, Section 1(1), and except for the following:

i. Pursuant to Regulations 401 KAR 59:010 and 61:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

ii. Pursuant to Regulations 401 KAR 59:010 and 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

iii. Pursuant to Regulation 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

For each boiler, the permittee shall maintain records of the occurrence and duration of each incident of fire box cleaning, soot blowing, fire building, startup, and shutdown.

3. Specific Testing Requirements:

a. For all boilers (except 767): Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted in the 12-month period immediately preceding the date of expiration of this permit.

b. For the 767 Boiler, the permittee shall conduct performance testing for particulate matter and visible emissions from fuel oil #2 combustion using Reference Methods 5 and 9 respectively within 60 days after achieving the maximum firing rate for fuel oil #2.

c. For the 767 Boiler, the permittee shall demonstrate compliance with the sulfur dioxide emission limits for natural gas and fuel oil #2 combustion through fuel supplier certification of the fuel sulfur content.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

d. For the 767 Boiler, the permittee shall conduct initial performance testing for nitrogen oxides in accordance with the procedures described in 40 CFR 60.46b (e) within 60 days after achieving the maximum firing rate. If the permittee intends to demonstrate compliance with the nitrogen oxides standards through an operating parameter monitoring plan, sufficient test data shall be gathered during the performance test to demonstrate the correlation between nitrogen oxides emissions and boiler operating parameters.

e. If fuel oil sampling is performed, sampling shall be performed in accordance with the procedures described in 40 CFR 60.46c (d)(2).

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
   i. The monthly (calender month) fuel usage rate (cubic feet/month or gallons per month) of each of the fuels (natural gas, fuel oils #2 and #6) listed previously for each of the boilers.
   ii. The monthly hours of operation of the 703 and 766 boilers.
   iii. The sulfur content of each type of fuel oil burned.

b. Once per calendar day, the permittee shall survey each boiler stack and maintain a daily log noting the following information:
   i. Whether any air emissions were visible from any individual stack;
   ii. All emission points from which visible emissions were observed;
   iii. Whether the visible emissions were normal for the boiler.

c. If no visible emissions are observed then no further observations are required. If visible emissions are observed, the permittee shall perform one of the following:
   i. The permittee shall perform a Method 9 reading for emission points of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   ii. The permittee shall observe and record in the daily log the following information:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.

d. For the 767 Boiler, the permittee shall:
   i. Install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions in accordance with the procedures described in 40 CFR 60.48b (b), (c), (d), (e), and (f); or
   ii. [40 CFR 60.48b (g)(2)] - Monitor boiler operating conditions and predict nitrogen oxides emissions as specified in a plan submitted pursuant to 40 CFR 60.49b (c).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

e. For the 767 Boiler, the permittee shall:
   i. Install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system in accordance with the procedures described in 40 CFR 60.48b (a) and (e); or
   ii. The permittee shall submit to U.S. EPA Region IV (with a copy to the Division), a petition for a waiver of the continuous opacity monitor (COM) requirement. Upon approval of the petition by U.S. EPA, the permittee shall monitor those parameters as required by U.S. EPA to determine compliance with the mass and visible emission standards for fuel oil #2 combustion.

5. Specific Recordkeeping Requirements:

The permittee shall maintain the following records:

a. The maximum design heat input capacity of each of the boilers.
b. The monthly fuel usage rate of each fuel at each boiler.
c. The monthly hours of operation of the 703 and 766 boilers.
d. The sulfur content of each type of fuel oil used. If fuel oil supplier certification is used demonstrate compliance with the sulfur content limits, the records shall contain the following information:
   i. The name of the oil supplier;
   ii. A statement from the oil supplier certifying the sulfur content of the oil.
e. A daily log of the visible emissions readings (see 4b. and 4c. above).
f. Results of the performance tests conducted at each boiler.
g. For the 767 Boiler, the permittee shall maintain the records required by:
   i. 40 CFR60.49b (d); and
   ii. 40 CFR60.49b (g) for each steam generating unit operating day.

6. Specific Reporting Requirements:

a. For the 767 Boiler, the permittee shall submit to the Division the following information:

40 CFR 60.49b (a)	Notification of the date of initial startup
40 CFR 60.49b (b)	Performance test/evaluation data
40 CFR 60.49b (h)	Excess emission reports
40 CFR 60.49b (i)	Quarterly reports of the information recorded under 40 CFR 60.49b (g)

b. Following the performance test, if the permittee elects to demonstrate compliance with the nitrogen oxides standards through the monitoring of boiler operating parameters, the permittee shall submit to the Division (with a copy to U.S. EPA Region IV), a plan that identifies the operating conditions to be monitored under 40 CFR 60.48b (g)(2) and the records to be maintained under 60.49b (j). The plan shall be submitted for approval within 360 days of the initial startup of the boiler. The plan shall include the elements identified in 40 CFR 60.49b (c).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS: (Continued)

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule:

For the 767 boiler:

a. Within 60 days after achieving the maximum firing rate, but no later than 180 days after initial startup of the 767 Boiler, the permittee shall conduct performance testing for nitrogen oxides as required by Regulation 40 CFR 60.45b (e).

b. Within 60 days after achieving the maximum firing rate for fuel oil #2, the permittee shall conduct performance testing for particulate matter and visible emissions as required by Regulation 401 KAR 59:015, Section 8 (1).

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(2) UTILITIES - FURNACES:

EIS No.	Dow Vent ID	Furnace ID	Make/Model	Date Installed	Maximum Rated Capacity (Fuels used)
A1	A1.01	1114	Struthers-Wells, Corp. Model 9CV 27-6 Dowtherm A Vaporizer	1965	19.7 mmBTU/hr (Natural Gas fired only)
AA	A2.01	3600	Struthers-Wells, Corp. Model 9CV 27-6 Dowtherm A Vaporizer	1986	19.7 mmBTU/hr (Natural Gas fired only)
AL	A10.01	5250	Struthers-Wells, Corp. Syltherm Vaporizer	08/01/90	25.9 mmBTU/hr (Natural Gas fired only)

APPLICABLE REGULATIONS:

a. For the 5250 and 3600 furnaces:
Regulation 401 KAR 59:015 applies to the particulate, sulfur dioxide and visible emissions.

b. For the 1114 furnace:
Regulation 401 KAR 61:015 applies to the particulate, sulfur dioxide and visible emissions.

1. Operating Limitations: None

2. Emission Limitations:

a. For the 1114 furnace, pursuant to Regulation 401 KAR 61:015, Sections 4 & 5:
   i. Emissions of particulate matter shall not exceed 0.48 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 5.51 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

b. For the 3600 furnace, pursuant to Regulation 401 KAR 59:015, Sections 4 &5:
   i. Emissions of particulate matter shall not exceed 0.48 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 2.27 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

c. For the 5250 furnace, pursuant to Regulation 401 KAR 59:015, Sections 4 &5:
   i. Emissions of particulate matter shall not exceed 0.27 lb/mmBTU.
   ii. Emissions of sulfur dioxide shall not exceed 0.84 lb/mmBTU.
   iii. The opacity of visible emissions shall not exceed 20 percent.

For each furnace, the permittee comply with the opacity limits above during all periods except as provided by 401 KAR 50:055, Section 1(1), and except for the following:

a. Pursuant to Regulations 401 KAR 59:015 and 61:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(2) UTILITIES - FURNACES: (Continued)

b. Pursuant to Regulations 401 KAR 59:015 and 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
c. Pursuant to Regulation 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Methods:

a. For the emission standards for particulate matter and sulfur dioxide:
Compliance with the emission standards shall be demonstrated through performance testing using Reference Methods specified in Regulation 401 KAR 50:015. Performance testing shall be conducted as required by the Division.
b. For visible emissions: During all periods of normal operation, where natural gas is the only fuel combusted, then source shall be assumed to be in compliance with the opacity limitations, except for the periods of fire box cleaning and soot blowing.

3. Testing Requirements:

For the furnaces listed above: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
The monthly (calendar month) fuel usage rate (cubic feet/month) of natural gas for each of the furnaces.
b. During period of firebox cleaning and soot blowing, the permittee shall survey each boiler stack and maintain a daily log noting the following information:
   i. Whether any air emissions were visible.
   ii. All emission points from which visible emissions were observed;
   iii. Whether the visible emissions were normal for the boiler.

5. Specific Recordkeeping Requirements:

The permittee shall maintain the following records:

a. For each furnace, the permittee shall maintain records of the occurrence and duration of each incident of fire box cleaning, soot blowing, fire building, startup and shutdown.
b. The monthly fuel usage rate of natural gas at each furnace.

6. Specific Reporting Requirements: None
7. Specific Control Equipment Operating Conditions: None
8. Alternate Operating Scenarios: None
9. Compliance Schedule: None
10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 1:

Dow Vent ID	Tank ID	Capacity (gallons)	Type	Dow Vent ID	Tank ID	Capacity (gallons)	Type
A-10 ABS	1505*	20,000	Horizontal, Fixed Roof	C2.10	1543	20,000	Horizontal, Fixed Roof
A-10 ABS	1506*	20,000	Horizontal, Fixed Roof	A-10 ABS	5146	16,500	Horizontal, Fixed Roof
A-10 ABS	1507*	20,000	Horizontal, Fixed Roof	U.06	785	100,000	Vertical, Fixed Roof
C2.09	1542*	20,000	Horizontal, Fixed Roof	W.09	954*	23,700	Vertical, Fixed Roof

* See Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to each of the tanks listed above.

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** Pursuant to 40 CFR 60.116b (b), for each of the tanks listed above, the permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

9. **Compliance Schedule:** None

10. **Compliance Certification Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 2:

EIS #	Dow Vent ID	Tank ID	Capacity	Type	Dow Vent ID	Tank ID	Capacity	Type
	A-10 ABS	5900	30000	Horizontal, Fixed Roof	A-10 ABS	5908	100000	Sphere
	A-10 ABS	5901	30000	Horizontal, Fixed Roof	A-10 ABS	5909	100000	Sphere
	A-10 ABS	5902	30000	Horizontal, Fixed Roof	A-10 ABS	5910	60000	Sphere
	A-10 ABS	5903	30000	Horizontal, Fixed Roof	D-10 MEVA	5911	160000	Sphere
	A-10 ABS	5904	30000	Horizontal, Fixed Roof	D-10 MEVA	5912	160000	Sphere
	A-10 ABS	5905	30000	Horizontal, Fixed Roof	A-10 ABS	5956	30000	Horizontal, Fixed Roof
	A-10 ABS	5906	200000	Sphere	A-10 ABS	5957	30000	Horizontal, Fixed Roof
	A-10 ABS	5907	100000	Sphere	A-10 ABS	5958	30000	Horizontal, Fixed Roof

* See Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to each of the tanks listed above.

1. Operating Limitations:

a. Pursuant to Regulation 40 CFR 60.112b (a)(3)(i), each of the storage tanks listed above shall be equipped with a closed vent system designed to collect all VOC vapors and gases discharged from the storage tanks, and operated with no detectable emissions as indicated by an instrument reading of less than 50 ppm above background and visual inspections, as determined by Regulation 40 CFR 60.485 (b) [Subpart VV]. Each closed vent system shall route emissions collected from the tanks to Vent Header System .

b. The permittee shall operate the closed vent system and the control devices in the Vent Header System in accordance with the operating plan described in Item 2. under 5. Specific Recordkeeping Requirements (see below).

c. For control device operating limitations, see the Vent Header System requirements.

2. Emission Limitations: Emissions of volatile organic compounds collected from each of the tanks listed above shall be reduced by 95% or greater in the Vent Header System prior to discharge to the atmosphere [40 CFR 60.112b (a)(3)(ii)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 2: (Continued)

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a. For each of the tanks listed above, the permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank [40 CFR 60.116b (b)].

b. For each of the tanks listed above, the permittee shall maintain on-site an operating plan containing the following information [40 CFR 60.113b (c)(1)(i), (ii)]:

i. Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. The documentation shall include a description of the gas stream from each tank that enters the Vent Header System, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for each of the control devices in the Vent Header System.

ii. A description of the parameters that are being monitored to ensure that each of the control devices in the Vent Header System are being operated in conformance with their design and an explanation of the criteria used for selection of the parameters.

6. Specific Reporting Requirements: See Vent Header System.

7. Specific Control Equipment Operating Conditions: See Vent Header System .

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 3:

	(D10.03)*	5915 Methanol Tank -	External Floating Roof
		Primary Seal:	Mechanical Shoe Seal
		Capacity:	1,000,000 gallons

* See Storage Tanks - Category 4 for Early Reduction Requirements.

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb)

1. **Operating Limitations:**
   The 5915 Tank shall be equipped with an external floating roof [40 CFR 60.112b (a)(2)] meeting the following specifications:
   40 CFR 60.112b(a)(2)(i) Primary/secondary seals
   40 CFR 60.112b(a)(2)(ii) Roof/rim openings
   40 CFR 60.112b(a)(2)(iii) Operating/filling/emptying requirements

2. **Emission Limitations:** None

3. **Testing Requirements:**
   The permittee shall perform the following testing procedures described in 40 CFR 60.113b(b):
   40 CFR 60.113b(b)(1) Measurement of gap areas and maximum gap widths
   40 CFR 60.113b(b)(2) Gap surface area of each gap location
   40 CFR 60.113b(b)(3) Total gap area determination
   40 CFR 60.113b(b)(4) Repair procedures
   40 CFR 60.113b(b)(5) Gap measurement notification
   40 CFR 60.113b(b)(6) Visual inspections
   The testing shall be performed in accordance with the frequencies specified in each subsection.

4. **Specific Monitoring Requirements:** See Above in **3. Testing requirements**

5. **Specific Recordkeeping Requirements:**
   a. The permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank [40 CFR 60.116b(b)].
   b. The permittee shall maintain a record of each liquid stored, the period of storage, and the maximum true vapor pressure of the liquid stored during the respective storage period [40 CFR 60.116b (c)].
   c. The permittee shall keep a record of each gap measurement performed as required by 40 CFR 60.113b(b). Each record shall contain [40 CFR 60.115b(b)(4)]:
      (i) The date of measurement;
      (ii) The raw data obtained in the measurement;
      (iii) The calculations described in 40 CFR 60.113b (b)(2) and (b)(3).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 3: (Continued)

6. **Specific Reporting Requirements:** After each seal gap measurement that detects gaps exceeding the limitations specified in 40 CFR 60.113b(b)(4), the permittee shall submit to the Division a report of the information required by 40 CFR 60.115b(b)(4) - Seal gap measurement notification.

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

9. **Compliance Schedule:** None

10. **Compliance Certification Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4:

a. The following tanks are subject to Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) and are also sources of hazardous air pollutants. Therefore, they are subject to Regulation 401 KAR 63:070 and form part of the permittee's plant wide Early Reductions commitment. This category only addresses early reductions requirements (see previous Categories for Kb requirements).

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A-10 ABS	1505	A-10 ABS	1506	A-10 ABS	1507	A-10 ABS	5146
A-10 ABS	5900	A-10 ABS	5901	A-10 ABS	5902	A-10 ABS	5903
A-10 ABS	5904	A-10 ABS	5905	A-10 ABS	5906	A-10 ABS	5907
A-10 ABS	5908	A-10 ABS	5909	A-10 ABS	5910	A-10 ABS	5956
A-10 ABS	5957	A-10 ABS	5958	C2.09	1542	C2.10	1543
D-10 MEVA	5911	D-10 MEVA	5912	D10.03	5915	U.06	785
W.09	954						

b. The following tanks are not subject to Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) and would be insignificant activities except that they are part of the Early Reduction Source and are subject to the Alternative Emission Limits.

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A-10 ABS	198	A-10 ABS	1133	A-10 ABS	1137	A-10 ABS	1138
A2.05	3520	A-10 ABS	1169	A-10 ABS	1500	A-10 ABS	1501
A-10 ABS	1502	A-10 ABS	1504	A-10 ABS	1510	A-10 ABS	1511
A-10 ABS	1512	A-10 ABS	1513	A-10 ABS	1515	A-10 ABS	1518
A-10 ABS	1530	A-10 ABS	1531	A-10 ABS	1570	A-10 ABS	1571
A-10 ABS	1572	A-10 ABS	3534	A-10ABS	3534	D-1 MEVA	1532
D-1 MEVA	1533	D1.03	1520	D1.04	1536	D1.05	1483
F15.06	2458	GAS.01	009	GAS.02	010	U.07	3100
U.08	790	U.09	710	W.03	923	W.04	925
W.04	926	W.07	866	W.08	974	W.22	1012
W.23	824	W.09	883	W.02	824		

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4: (Continued)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of hazardous air pollutants from each of the tanks listed above.

1. **Operating Limitations:**
   Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

2. **Emission Limitations:** See Early Reductions Section.

   Compliance Demonstration Method: Emissions of all hazardous air pollutants shall be calculated using the current AP-42 emission methodology for storage tanks.

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** See **5. Specific Recordkeeping Requirements**.

5. **Specific Recordkeeping Requirements:**
   a. For each of the tanks listed above, the permittee shall keep records of the following information:
      i. Emissions calculations for all hazardous air pollutants;
      ii. The methods used to determine HAP and weighted HAP emissions.
   b. The permittee shall maintain readily accessible records of all parameters needed to calculate emissions from each of the tanks listed above using the latest AP-42 emission calculation methodology for storage tanks.
   c. For tanks which are vented to a common control or recovery device, the permittee may elect to calculate total emissions from the common control or recovery device instead of each individual tank. In those instances, individual tank calculations are not required and the permittee shall maintain records of the calculations and the methods used to determine HAP and weighted HAP emissions.

6. **Specific Reporting Requirements:**
   All emissions of hazardous air pollutants shall be included in the permittee's Early Reduction reports as described in the Early Reduction Requirements section.

7. **Specific Control Equipment Operating Conditions:**
   a. For the 5915 Methanol Tank, the permittee shall follow the procedures described under **Storage Tanks - Category 3**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) STORAGE TANKS - CATEGORY 4: (Continued)

b. For all other storage tanks for which emission estimates are based on a functioning secondary seal system, the permittee shall maintain and inspect the secondary seal system such that:
   i. The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.
   ii. There are to be no holes, tears, or other openings in the seal or seal fabric.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(4) REACTORS:

EIS No.	Dow Vent ID	Reactor ID	Process Unit
-	P10.01/T10.01	1103	A1
-	P10.01/T10.01	1141	A1
-	P10.01/T10.01	1183	A1
-	D1.01	1410	D1
-	D1.01	1420	D1
-	D1.01	3400	D1
-	P10.01/T10.01	3500	A2
-	P10.01/T10.01	5100	A10
-	P10.01/T10.01	5200	A10
-	T10.01	5280	R10
-	T10.01	5660	D10
	T10.01	5670	D10
-	T10.01	5770	D10

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 60:700 (40 CFR 60 Subpart RRR) applies to each of the reactors listed above.

b. Exemption - The reactors listed below are exempt from Regulation 401 KAR 60:700 since they are part of a process unit that does not produce any of the chemicals listed under 40 CFR 60.707: 1301, 1310, 1348, 3201, 5501, 5509, 5517, 5519.

1. Operating Limitations: The vent stream from each of the reactors listed above shall be routed to a distillation column subject to Regulation 401 KAR 59:725 (40 CFR 60 Subpart NNN). There shall be no other releases to the ambient air except from pressure relief valves.

2. Emission Limitations: See requirements for distillation columns

3. Testing Requirements: See requirements for distillation columns

4. Specific Monitoring Requirements: See requirements for distillation columns.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(4) REACTORS: (Continued)

5. **Specific Recordkeeping Requirements:** Pursuant to 40 CFR 60.705(r), the permittee shall maintain a process design description for each of the reactor systems listed above for the life of the process. If there are any changes to the process, the process design description shall be updated to include the changes.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

9. **Compliance Schedule:** None

10. **Compliance Certification Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 1:

EIS No.	Dow Vent ID	Column ID	Process Unit	EIS No.	Dow Vent ID	Column ID	Process Unit
-	P10.01/T10.01	1127	A1	-	P10.01/T10.01	5150	A10
-	P10.01/T10.01	1176	A1	-	T10.01	5300	B10
-	T10.01	1210	B1	-	T10.01	5310	B10
-	T10.01	1260	B1	-	T10.01	5320	B10
-	T10.01	2500	B2	-	T10.01	5330	B10
-	P10.01/T10.01	3526	A2	-	T10.01	5340	B10
-	P10.01/T10.01	3536	A2	-	T10.01	5350	B10
-	T10.01	3700	B1	-	T10.01	5690	D10
-	T10.01	3710	B1	-	T10.01	5700	D10
-	T10.01	3720	B1	-	T10.01	5750	D10
-	T10.01	4500	B3	-	T10.01	6400	B20
-	P10.01/T10.01	5140	A10	-	T10.01	6410	B20
-	P10.01/T10.01	5141	A10	-			

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:725 (40 CFR 60 Subpart NNN) applies to each of the distillation units listed above.

1. **Operating Limitations:**
   The vent stream from each of the distillation units listed above shall vent to the Vent Header System (See Vent Header System requirements). There shall be no other releases to the ambient air except from pressure relief valves.

2. **Emission Limitations:**
   Emissions of total organic compounds (excluding methane and ethane) in the vent stream from each of the distillation columns listed above shall be reduced by 98 weight-percent prior to discharge to the ambient air.

3. **Testing Requirements:**
   The permittee shall conduct any future performance testing on the distillation columns in accordance with procedures in 40 CFR 60.664 as required by the Division.

4. **Specific Monitoring Requirements:**
   See Vent Header System requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 1: (Continued)

5. Specific Recordkeeping Requirements:
See Vent Header System requirements.

6. Specific Reporting Requirements:
See Vent Header System requirements.

7 Specific Control Equipment Operating Conditions:
See Vent Header System requirements.

8. Alternate Operating Scenarios:
See Vent Header System requirements.

9. Compliance Schedule:
None

10. Compliance Certification Requirements:
None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 2:

B Process Units: 5355
C Process Units: 1306, 1307, 3000, 5531, 5533, 5502
D Process Units: 1411, 1421, 1430, 3402, 3430

APPLICABLE REGULATIONS:

None. The following distillation units are exempt from 40 CFR 60 Subpart NNN:

i. B Process Units - 5355 [Column is exempt per 40 CFR 60.660 (c) (3)]
ii. C Process Units - 1306, 1307, 3000, 5531, 5533, 5502 [Columns do not produce any of the chemicals listed in 40 CFR 60.667].
iii. D Process Units - 1411, 1421, 1430, 3402, 3430 [The columns have a total resource effectiveness (TRE) index value greater than 8.0 without the use of an air pollution control device and are exempt per 40 CFR 60.660 (c)(4)].

1. Operating Limitations:

All distillations units associated with the D Process Area shall vent to the D-1 MEVA (Methyl Chloride Vapor Absorber) Absorption Column.

2. Emission Limitations:

The permittee shall maintain a TRE index value of greater than 8.0 without use of a VOC emission control devices on the vent stream from the D-1 MEVA Column [40 CFR 60.662 (c)].

3. Testing Requirements:

The permittee shall conduct performance testing on the distillation units listed above as required by the Division in accordance with the procedures described in 40 CFR 60.664 (d), (e), and (f).

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

Pursuant to 40 CFR 60.665 (h), the permittee shall keep up-to-date, readily accessible records of the following information:

i. Any changes in production capacity, feedstock type, catalyst type, or any replacement, removal, or addition of recovery equipment or a distillation unit;
ii. Any recalculation of the TRE index value performance pursuant to 60.664 (f);
iii. The results of any performance test performed pursuant to the methods and procedures required by 60.664 (d).

6. Specific Reporting Requirements:

The permittee shall submit to the Division semiannual reports of any recalculation of the TRE index value, pursuant to 60.665 (d) for the D Process distillation units listed above.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) DISTILLATION COLUMNS - CATEGORY 2: (Continued)

7. Specific Control Equipment Operating Conditions:
None

8. Alternate Operating Scenarios:
None

9. Compliance Schedule:
None

10. Compliance Certification Requirements:
None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM:

AA (T10.01) T-10 Thermal Oxidizer System:
Vent Collection System (Two knockout pots, piping)
Burner/Combustion Chamber (Single secondary burner, 6.0 mmBTU/hr, natural gas fired, 25% excess air)
Direct Quench Chamber
Scrubbing System (HCl Absorber, 2 Ionizing Wet Scrubbers)
Induced Draft Fan

Specifications:
Manufacturer: IT McGill
Rated Capacity: 4804 lbs/hr
Combustion air supply: Single 10 inch port, forced draft, 3500 scfm maximum

BB (P10.01) P-10 Adsorption System:
6300 Preheater
6311, 6312, 6313, 6314 Adsorbers
6316 Surge Tank

Specifications:
Manufacturer: UOP
Adsorbent: Silica Gel
Number of Beds: 4

CC (B2.03) B-2 Wet Scrubber System:
Manufacturer: Hasting
Type: Wet countercurrent cascade scrubber with baffles
Scrubbing liquid: Water @ 25 gpm

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:725 (40 CFR 60 Subpart NNN) applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from distillation columns.
Regulation 401 KAR 60:700 (40 CFR 60 Subpart RRR) applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from reactors.
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to the emissions of volatile organic compounds (VOC) that are sent to the Vent Header System from storage tanks.
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to all emissions of hazardous air pollutants (HAPs) that are released from the Vent Header System.

1. **Operating Limitations:** Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

2. Emission Limitations:

a. Emissions of total organic compounds (excluding methane and ethane) in the vent streams from each of the affected facilities vented to the vent header system shall be reduced by 98 weight-percent prior to discharge to the ambient air.

b. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

Compliance Demonstration Method:

a. The T-10 Unit shall be operated at a minimum temperature not less than 50°C of the permittee's last performance test during all 3-hour periods and residence time shall be at least 75 percent of that in the last performance test during all 3-hour periods.

b. To calculate the MeCl and Methanol emission rates for Early Reductions:
   i. The permittee shall monitor HAP concentrations as specified in the permit sections for emission points A2.06, A10.08 and D10.01.
   ii. Hourly mass flow will be determined by using a differential pressure flowmeter.
   iii. Hourly uncontrolled HAP emissions shall be calculated by multiplying the HAP concentration determined that day by the hourly flow rates.
   iv. Controlled emissions shall be determined by using the latest performance test efficiencies (CE) and multiplying uncontrolled emissions by (1-CE).
   v. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

c. To calculate HCl emission rates for Early Reductions:
   i. Calculate emission factor of HCl from most recent performance test.
   ii. Cl_2 emissions = (Cl_2 emission factor) x (Total monthly THC)

d. To calculate Chlorine emission rates for Early Reductions:
   i. Calculate emission factor of Cl_2 from most recent performance test.
   ii. Cl_2 emissions = (Cl_2 emission factor) x (Total monthly THC combusted)

3. Testing Requirements:

At least twelve months before the renewal date of this permit, the permittee shall conduct a performance test on the P-10/T-10 control system. This requirement shall be waived by the Division if a performance test has been performed within the previous two years.

4. Specific Monitoring Requirements:

For the T-10 Unit:

a. Pursuant to 40 CFR 60.663, the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
   i. A temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5°C, whichever is greater. The temperature monitoring device shall be installed in the oxidizer firebox.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

4. a. ii. A flow indicator that provides a record of the vent stream flow to the oxidizer at least once every hour for each affected facility vented to the oxidizer. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the oxidizer inlet and before being combined with any other vent stream.

For the T-10 HCl Absorber and the B-2 Vent Scrubber:

b. Pursuant to 401 KAR 63:070 (40 CFR 63 Subpart D), the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
   i. A flow indicator that provides a record of the water flow to the control device. Flow shall be monitored at least once every 15 minutes during periods of operation.
   ii. A flow indicator that provides a record of the vent stream flow to the control device. Flow shall be monitored at least once every 15 minutes during periods of operation.
   iii. Records of periods of operations. All periods of operation of the B-2 Vent Scrubber shall be reported to the Division pursuant to the requirements of 401 KAR 50:055.

For the P-10 Unit:

c. Pursuant to 401 KAR 63:070 (40 CFR 63 Subpart D), the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
   i. An on-line IR Analyzer equipped with a continuous recorder calibrated for ethylene to record at least once every 15 minutes during periods of operation.
   ii. A flow indicators that provides records of the vent stream flow to the Adsorption unit from the A-2 and A-10 Process Areas. Flow shall be monitored and recorded at least once every 15 minutes during periods of operation.

d. Pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e), the permittee shall, as specified by the Administrator, monitor the process parameter(s) which would indicate proper operation and maintenance of the P-10 adsorber.

5. Specific Recordkeeping Requirements:

For the T-10 Unit:

a. Pursuant to 40 CFR 60.665, the permittee shall keep an up-to-date, readily accessible record of the following data measured during the last performance test:
   i. The average firebox temperature of the T-10 Unit measured at least once every 15 minutes and averaged over the same time period of the performance testing.
   ii. The percent reduction of total organic compounds determined as specified in 60.664(b) achieved by the T-10 Unit, or the concentration of total organic compounds (ppmv, by compound) determined as specified in 60.664(b) at the outlet of the control device on a dry basis corrected to 3 percent oxygen.

b. Pursuant to 40 CFR 60.665 (c) and 40 CFR 60.705 (c), the permittee shall keep up-to-date, readily accessible continuous records of the firebox temperature and flow rates of each vent stream to the T-10 Unit.

c. Pursuant to 40 CFR 60.665 (c) and 40 CFR 60.705 (c), the permittee shall keep up-to-date, readily accessible records of all 3-hour periods of operation during which the average combustion temperature was more than 50°C below the average combustion temperature during the most recent performance test.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

d. Pursuant to 401 KAR 63:070 (40 CFR 63 Subpart D), the permittee shall keep records of Total Hydrocarbons (THC) combusted each month.

For the P-10 Unit:

e. Pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e), the permittee shall, as specified by the Administrator, maintain records of the parameter(s) which would indicate proper operation and maintenance of the P-10 adsorber.

f. Pursuant to 401 KAR 63:070 (40 CFR 63 Subpart D), the permittee shall maintain the following records:
   i. The rejection efficiency for VOC and MeCl as obtained in the source last performance test.
   ii. The average hourly concentration of ethylene.
   iii. The estimate vent flow rate based on the incoming vent flow rates from A-2 and A-10 process areas.

For the T-10 HCl Absorber and the B-2 Vent Scrubber:

g. Pursuant to 401 KAR 63:070 (40 CFR 63 Subpart D), the permittee shall maintain up-to-date, readily accessible, continuous records of the water flow to the T-10 HCl absorber and the B-2 Vent scrubber by computer system or strip chart recorder.

6. Specific Reporting Requirements:

For the T-10 and P-10 Units:

a. Pursuant to 40 CFR 60.665 (l) and 40 CFR 60.705 (l), the permittee shall submit semi-annual records of the following information.
   i. All 3-hour periods of operation during which the average combustion temperature of the T-10 Unit was more than 50°C below the average combustion temperature during the most recent performance test.
   ii. For the P-10 Unit, all exceedences of the monitored parameters recorded as required by **5. Specific Recordkeeping Requirements, Item d.**
   iii. All periods when the vent streams were diverted from the T-10 and P-10 Units or had no flow rate.

   The reports shall be submitted by February 28th and August 30th of each calender year.

b. Emissions of hazardous air pollutants (HAPs) from the Vent Header System shall be reported as described in the Early Reductions section (See Group Requirements).

7. Specific Control Equipment Operating Conditions:

See previous sections.

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) VENT HEADER SYSTEM: (Continued)

9. Compliance Schedule:

a. Within 30 days after the issuance of the final permit, the permittee, pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e) shall provide to the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) information describing the operation of the P-10 Adsorber and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

b. Within 180 days of approval of a monitoring plan for the P-10 Unit by the Administrator, the permittee shall perform the following or equivalent performance test:
   i. Method 18, 25 or equivalent to determine the concentration of TOC in the Adsorber outlet and inlet.
   ii. Method 2, 2A, 2B, 2C or 2D, as appropriate to determine flowrate.

c. At least 30 days prior to the date of the required performance tests for the P-10 Adsorber, the permittee shall complete and return a Compliance Test Protocol (Form DEP6027) to the Division's Frankfort Central Office. The protocol form shall be used by the Division to determine if a pretest meeting is required. The Division shall be notified of the actual test date at least 10 days prior to the tests.

10. Compliance Certification Requirements:

The permittee shall submit a progress certification form (DEP 7007BB) upon meeting the requirements above in section 9a and 9b.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: This category covers the regulated pipeline components i.e., those subject to equipment leak standards.

EIS	Dow ID	Process Area	Count	Type of Connector
--	(--)	Barge Unloading Dock	22	Light Liquid Valves
			39	Light Liquid Connectors
--	(--)	D-1 Process Area	4	Light Liquid Pumps
			55	Vapor Pressure Relief Valves
			1	Compressor
			260	Vapor Valves
			538	Light Liquid Valves
			543	Vapor Connectors
			1770	Light Liquid Connectors
--	(--)	D-10 Process Area	22	Vapor Pressure Relief Valves
			3	Liquid Pressure Relief Valves
			1	Compressor
			224	Vapor Valves
			509	Light Liquid Valves
			562	Vapor Connectors
			703	Light Liquid Connectors

Note: The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit. The permittee may add or remove pipeline equipment from the Barge Unloading Dock, D-1 and D-10 Process Areas without a permit revision as long as the equipment continues to comply with the requirements listed below.

APPLICABLE REGULATIONS:

Regulation 401 KAR 63:101 (40 CFR 63 Subpart F) applies to the Barge Unloading Dock, D-1 and D-10 Process Areas.

Regulation 401 KAR 63:160(40 CFR 63 Subpart H) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

c. Regulation 401 KAR 60:480 (40 CFR 60 Subpart VV) applies to the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. However, in accordance with 40 CFR 63.160 (c), the permittee has elected to apply the requirements of 40 CFR 63 Subpart H to all the pipeline equipment in the Barge Unloading Dock, D-1 and D-10 Process Areas. Therefore, the permittee is only required to comply with 40 CFR 63 Subpart H. All VOC in the equipment shall be considered, for purposes of applicability and compliance with Subpart H, as if it were organic hazardous air pollutant (HAP). Compliance with Subpart H shall be deemed to constitute compliance with Subpart VV.

1. Operating Limitations: For the pipeline equipment, the permittee shall implement a leak detection and repair (LDAR) program containing the following elements:

a. Each piece of pipeline equipment within the Barge Unloading Dock, D-1 and D-10 Process Areas shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H [40 CFR 63.162 (c)].
b. When a leak is detected as specified in 40 CFR 63.163 and 63.164; 63.168 and 63.169; and 63:172 through 63.174, the procedures described in 40 CFR 63.162 (f) (1) - (3) shall be followed to identify the leaking piece.
c. Specific standards for each type of pipeline equipment described under **2. Emission Limitations** below.

Compliance Demonstration Method: Pursuant to 40 CFR 63.162 (a), compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 63.181 and the reports required by 63.182, review of performance test results, and by inspections.

2. Emission Limitations: The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 63 Subpart H, the permittee shall maintain records of the reason(s) why the equipment is exempt.

a. Standards: Pumps in light liquid service [40 CFR 63.163]:

40 CFR 63.163 (a)	Implementation and compliance provisions
40 CFR 63.163 (b)	Monitoring requirements, leak detection levels, frequency of monitoring
40 CFR 63.163 (c)	Repair procedures and time frames
40 CFR 63.163 (d)	Calculation procedures to determine percent leaking pumps and requirements for quality improvement programs
40 CFR 63.163 (e)-(j)	Exemptions for specific types of pumps

b. Standards: Compressors [40 CFR 63.164]:

40 CFR 63.164 (a)-(e)	Operations requirements
40 CFR 63.164 (f)	Criteria for leak detection
40 CFR 63.164 (g)	Repair procedures and time frames
40 CFR 63.164 (h),(i)	Exemptions for specific types of compressors

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

c. Standards: Pressure relief devices in gas/vapor service [40 CFR 63.165]:

40 CFR 63.165 (a)	Operational requirements
40 CFR 63.165 (b)	Pressure release procedures
40 CFR 63.165 (c)-(d)	Exemptions for specific types of pressure relief devices

d. Standards: Sampling Connection Systems [40 CFR 63.166]:

40 CFR 63.166 (a)-(c)	Operational requirements

e. Standards: Open-ended valves or lines [40 CFR 63.167]:

40 CFR 63.167 (a)-(c)	Operational requirements
40 CFR 63.167 (d)-(e)	Exemptions for specific types of valves

f. Standards: Valves in gas/vapor service and in light liquid service [40 CFR 63.168]:

40 CFR 63.168 (a)	Operational requirements
40 CFR 63.168 (b)-(d)	Monitoring requirements and intervals
40 CFR 63.168 (e)	Calculation procedures to determine percent leaking valves
40 CFR 63.168 (f)	Leak repair time frames
40 CFR 63.168 (g)	First attempt repair procedures
40 CFR 63.168 (h)-(i)	Exemptions for unsafe-to-monitor and difficult-to-monitor valves

g. Standards: Pumps, valves, connectors, agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]:

40 CFR 63.169 (a)	Monitoring requirements and frequency
40 CFR 63.169 (b)	Leak detection levels
40 CFR 63.169 (c),(d)	Leak repair time frames and procedures

h. Standards: Delay of repair [40 CFR 63.171]:

40 CFR 63.171	Allowances for delay of repair

i. Standards: Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]:

40 CFR 63.174 (a)	Operational requirements
40 CFR 63.174 (b)	Monitoring requirements and intervals
40 CFR 63.174 (c)	Procedures for open connectors or connectors with broken seals
40 CFR 63.174 (d)	Leak repair time frames
40 CFR 63.174 (e)	Monitoring frequency for repaired connectors
40 CFR 63.174 (f)-(h)	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174 (i)	Calculation procedures to determine percent leaking connectors
40 CFR 63.174 (j)	Optional credit for removed connectors

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

j. Quality improvement program for valves [40 CFR 63.175]:
Pursuant to 40 CFR 63.168 (d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175 (a)	Quality improvement program alternatives
40 CFR 63.175 (b)	Criteria for ending quality improvement programs
40 CFR 63.175 (c)	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175 (d)	Quality improvement program to demonstrate further progress
40 CFR 63.175 (e)	Quality improvement program of technology review and improvement

k. Quality improvement program for pumps [40 CFR 63.176]:
Pursuant to 40 CFR 63.163 (d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Barge Unloading Dock, D-1 and D-10 Process Areas leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176 (a)	Applicability criteria
40 CFR 63.176 (b)	Criteria for ending the quality improvement program
40 CFR 63.176 (c)	Criteria for resumption of the quality improvement program
40 CFR 63.176 (d)	Quality improvement program elements

Compliance Demonstration Method: A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

3. Testing Requirements: The permittee shall comply with the following test methods and procedures requirements pursuant to 40 CFR 63.180 (a):

40 CFR 63.180 (b)	Monitoring procedures, test methods and calibration procedures
40 CFR 63.180 (c)	Leak detection monitoring procedures
40 CFR 63.180 (d)	Procedures for determining organic HAP service applicability

Fulfill all testing requirement per **2. Emission Limitations**

4. Specific Monitoring Requirements:

a. See **3. Testing Requirements** above.
b. Fulfill all monitoring requirement per **2. Emission Limitations**

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 1: (Continued)

5. Specific Recordkeeping Requirements: [40 CFR 63.181]

a. The permittee may comply with the recordkeeping requirements for the Barge Unloading Dock, D-1 and D-10 Process Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

b. The permittee shall maintain all records pertaining to the pipeline equipment required by 40 CFR 63.181 (b).

c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years, according to 40 CFR 63.181 (c).

d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.

e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for the period of the quality improvement program for the Barge Unloading Dock, D-1 and D-10 Process Areas.

6. Specific Reporting Requirements:

The permittee shall submit the following reports:

a. 40 CFR 63.182 (a)(1), Initial Notification. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

b. 40 CFR 63.182 (a)(2), Notification of Compliance Status. The permittee has fulfilled this requirement through documentation dated October 20, 1995 submitted to the Division.

c. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2). The semi-annual reports shall be submitted by February 28th and August 30th of each year and shall cover the last 6 months and the first 6 months of each calendar year respectively.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(7) PIPELINE EQUIPMENT - CATEGORY 2: This category covers the non-regulated pipeline equipment i.e., equipment that is not subject to any equipment leaks standard but does not qualify as an insignificant activity because combined emissions are greater than 5 tpy.

EIS	Dow ID	Process Area	Count	Type of Connector
--	(--)	Non-HON Areas	83	Light Liquid Pumps
			225	Vapor Pressure Relief Valves
			24	Compressor
			3457	Vapor Valves
			3000	Light Liquid Valves
			6148	Vapor Connectors
			5000	Light Liquid Connectors

Note: The pipeline equipment count listed above are approximate. The permittee may add or remove pipeline equipment without a permit revision as long a modification does not trigger new applicable requirements.

1. Operating Limitations: None

2. Emission Limitations: None

3. Testing Requirements: None.

4. Specific Monitoring Requirements: None

5. Specific Record Keeping Requirements: None

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(8) A-1 PROCESS AREA:

-- (A1.02) A-1 Silicon/Sand Hoppers (1080, 1100, 1180):
All hoppers vented through a single baghouse (1132)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicone/Sand Hoppers in the A-1 Process Area.

1. **Operating Limitations:** The baghouse on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence and duration of each incident when the hoppers are in operation but the baghouse is not.

2. **Emission Limitations:**
For the A-1 Silicon/Sand Hoppers (A1.02):
a. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
b. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

Compliance Demonstration Method:
a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]
b. Opacity Limit - During all periods of operation or malfunction of the baghouse, the permittee shall determine compliance through maintenance of the records required by Item e. under **5.(Specific Recordkeeping Requirements below)**.

3. **Testing Requirements**:
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across the baghouse.
b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(8) A-1 PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for the baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
b. The operational procedures and preventive maintenance records for the baghouse.
c. Continuous records of the pressure drop across the baghouse during all periods of operation.
d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through the baghouse during all periods of operation.
e. During all periods of operation or malfunction of the baghouse, a daily (calendar day) log of the following information shall be kept:
    i. Whether any air emissions were visible from the hopper(s) associated with the baghouse of concern.

    If visible emissions are observed, the permittee shall record the following information:
    ii. Whether the visible emissions were normal for the process.
    iii. The color of the emissions and whether the emissions were light or heavy.
    iv. The cause of the abnormal visible emissions.
    v. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA:

-- (A2.02) A-2 Silicon/Sand Hoppers: (3513, 3514)
Both hoppers vented through a single baghouse (3510)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicon/Sand Hoppers in the A-2 Process Area.

1. **Operating Limitations:** The baghouse on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence and duration of each incident when the hoppers are in operation but the baghouse is not.

2. **Emission Limitations:**
For the A-2 Silicon/Sand Hoppers (A2.02):
a. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
b. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

Compliance Demonstration Method:
a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]
b. Opacity Limit - During all periods of operation or malfunction of the baghouse, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. **Testing Requirements**:
Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across the baghouse.
b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through the baghouse when the baghouse is in operation.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for the baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
b. The operational procedures and preventive maintenance records for the baghouse.
c. Continuous records of the pressure drop across the baghouse during all periods of operation.
d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through the baghouse during all periods of operation.
e. During all periods of operation or malfunction of the baghouse, a daily (calendar day) log of the following information shall be kept:
    i. Whether any air emissions were visible from the hopper(s) associated with the baghouse of concern.

    If visible emissions are observed, the permittee shall record the following information:
    ii. Whether the visible emissions were normal for the process.
    iii. The color of the emissions and whether the emissions were light or heavy.
    iv. The cause of the abnormal visible emissions.
    v. Any corrective actions taken.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA:

-- (A2.06) A-2 Secondary Recovery (# 3595):
Vent Condenser (3644B)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of methyl chloride.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Emissions of Methyl Chloride shall be calculated as follows:

a. The permittee shall take daily samples of the vent gas (post 3644B condenser) and analyze for Methyl Chloride during all periods that A-2 is venting to atmosphere and not to the vent header system.
b. Hourly flow rates shall be determined using a differential pressure flowmeter.
c. Hourly HAP emission shall be calculated by multiplying the daily HAP concentration by the hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: See Early Reductions requirements.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis or hourly TOC concentration.
b. Vent flowrate. shall be determined on an hourly average basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of all measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average hourly flow rate.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions: None.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(9) A-2 PROCESS AREA: (continued)

8. Alternate Operating Scenarios:

Upon submittal and approval of an monitoring plan, emissions of Methyl Chloride may be calculated as follows:

a. The permittee shall determine hourly average TOC concentration of vent gas (post 3644B condenser) during periods that A-2 is venting to atmosphere and not to the vent header system.
b. TOC shall be converted to Methyl Chloride by multiplying by the appropriate conversion factor.
c. Hourly flow rates shall be determined by using a differential pressure flowmeter.
d. Hourly HAP emission shall be calculated by multiplying the hourly HAP concentration by the hourly flow rates.
e. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

-- (A10.02) A-10 Silicon/Sand Hoppers: (5110, 5115)
Both hoppers vented through a single baghouse (5112)

-- (A10.05) A-10 Silicon/Sand Hoppers: (5210, 5215)
Both hoppers vented through a single baghouse (5212)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the Silicon/Sand Hoppers in the A-10 Process Area.

1. Operating Limitations: The baghouses on the Silicon/Sand Hoppers shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the hoppers are in use.

Compliance Demonstration Method: The permittee shall record the occurrence and duration of each incident when the hoppers are in operation but the baghouses are not.

2. Emission Limitations:

a. For the A-10 Silicon/Sand Hoppers (A10.02):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

b. For the A-10 Silicon/Sand Hoppers (A10.05):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3.(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3.(1), the opacity of visible emissions shall not equal or exceed 20 percent.

c. For A10.02 and A10.05, see also **(23) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.

Compliance Demonstration Method:

a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]

b. Opacity Limit - During all periods of operation or malfunction of the baghouses, the permittee shall determine compliance through maintenance of the records required by Item e. under **5.(Specific Recordkeeping Requirements below)**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA: (Continued)

3. **Testing Requirements**: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**

a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across each baghouse.

b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

5. **Specific Recordkeeping Requirements:**

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).

b. The operational procedures and preventive maintenance records for each baghouses.

c. Continuous records of the pressure drop across each baghouse during all periods of operation.

d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through each baghouse during all periods of operation.

e. During all periods of operation or malfunction of any of the baghouses, a daily (calendar day) log of the following information shall be kept:

   i. Whether any air emissions were visible from the hopper(s) associated with the baghouse(s) of concern.

   If visible emissions are observed, the permittee shall record the following information:

   ii. Whether the visible emissions were normal for the process.

   iii. The color of the emissions and whether the emissions were light or heavy.

   iv. The cause of the abnormal visible emissions.

   v. Any corrective actions taken.

6. **Specific Reporting Requirements**: None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

9. **Compliance Schedule:** None

10. **Compliance Certification Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

-- (A10.08) A-10 Secondary Recovery (# 5192):
Coolant: Syltherm
-- (A10.08) A-10 Absorber

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride and Hydrogen Chloride.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Emissions of Methyl Chloride and Hydrogen Chloride shall be calculated as follows:

a. Dow Corning shall take daily samples of vent gas using an on-line GC (following the 5199 Condenser) for the A-10 Absorber line and at the outlet of the 5195 Absorber for the A-10 Secondary Recovery and analyze for methyl chloride and chlorosilanes during all periods that A-10 is venting to atmosphere and not to the vent header system.
b. Continuous flow rates shall be determined by using differential pressure flowmeters.
c. Hourly HAP emissions shall be calculated be multiplying by the daily HAP concentration by the average hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
At least twelve months prior to the renewal date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine Methyl Chloride emissions and a Reference Method 26A test to determine Hydrogen Chloride emissions.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis,
b. Vent flowrate. shall be determined on a continuous basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Average daily mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(10) A-10 PROCESS AREA:

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(11) B-2/B-3 PROCESS AREA:

-- (B2.01) B-2/B-3 CCR Scrubber (2593)
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emission of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate. through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
Emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(12) B-10 PROCESS AREA:

-- (B10.01) B-10 CCR Scrubber (5393)
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate. through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP Emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(13) B-20 PROCESS AREA:

-- (B20.01) B-20 CCR Scrubber (6493)
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
Water flowrate. through the scrubber.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate. through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance with manufacturer's specifications.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREAS:

-- (C2.01) C-2 Process Venturi (1344):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

-- (C3.01) C-3 Process Venturi (3212):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

-- (C10.01) C-10 Process Venturi (5526):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water containing 10% HCl

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride, Methylene Chloride, and Hexane.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Historical mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
Water flow rate to the scrubbers.

5. Specific Recordkeeping Requirements:
Water flowrate. through the scrubber.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA: (Continued)

7. Specific Control Equipment Operating Conditions:
The venturi scrubber shall be operated in accordance with manufacturer's specifications. The following minimum average flowrates shall be maintained. Flowrates are based on an hourly-average basis -

C2.01	5 GPM (gallons per minute)
C3.01	5 GPM (gallons per minute)
C10.01	4 GPM (gallons per minute)

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA:

-- (C2.02) C-2 Process Absorber (3052A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C2.02) C-2 Process Absorber (3052B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

-- (C3.02) C-3 Process Absorber (3254A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C3.02) C-3 Process Absorber (3254B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

-- (C10.02) C-10 Process Absorber (5553A):
Type: Cocurrent Falling Film Scrubber
Scrubbing Liquid: Water

(C10.02) C-10 Process Absorber (5553B):
Type: Countercurrent Packed Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
See Early Reduction Requirements.

4. Specific Monitoring Requirements:
a. Vent feed rate.
b. Scrubber feed rates.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(14) C PROCESS AREA: (Continued)

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Process feed rates.
b. Water flowrate. through the scrubber.
c. Duration of the chlorosilane feed.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:
During vent feed the scrubber shall be operated in accordance to manufacturer's specifications.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(15) D-1 PROCESS AREA:

-- (D1.01) D-1 MEVA Column (3415, 3416, 3422):
Methanol Scrubber (1443)
Type: Countercurrent Packed Scrubbers

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methanol and Methyl Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Emissions of Methanol and Methyl chloride shall be calculated as follows:

a. The permittee shall take and analyze daily samples of vent gas (15 feet below the outlet stack) and analyze for Methyl Chloride and Methanol once daily.
b. Hourly flow rate shall be determined by using a differential pressure flowmeter after the 3426 knock-out pot and before the water scrubber.
c. Hourly HAP emissions shall be calculated be multiplying by the HAP concentration determined that day by the hourly flow rates.
d. Monthly HAP emissions shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:

a. Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.
b. All distillations units associated with the D Process Area shall vent to the D-1 MEVA (Methanol Vapor Absorber) Absorption Column. The permittee shall maintain a TRE index value of greater than 8.0 without use of VOC emission control devices on the vent stream from the D-1 MEVA Column [40 CFR 60.662 (c)].

3. Testing Requirements:
At least twelve months prior to the renewal date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine Methanol and Methyl Chloride emissions.

4. Specific Monitoring Requirements:

a. Vent HAP composition shall be determined on a daily basis.
b. Vent flowrate. shall be determined on an hourly average basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(15) D-1 PROCESS AREA:

5. Specific Recordkeeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Hourly flow data.
d. Periods of monitor downtime and the reason(s) for downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:

HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:

a. The scrubber water flow shall be at least 2 gallons per minute while the scrubber is in operation.
b. Preventive maintenance shall be performed in accordance with the manufacturer's recommendations. Preventive maintenance shall include:
    i. Cleaning or replacement of spray nozzles.
    ii. Check/calibration of critical instruments, e.g. water flow meters or indicators.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(16) D-10 PROCESS AREA:

-- (D10.01) D-10 MEVA Column (5760, 5761)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride and Methylene Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:
Emissions of Methanol and Methyl chloride shall be calculated as follows.

a. The permittee shall take samples on a daily basis of vent gas (post 5671 MEVA vent condenser) and analyze for Methyl Chloride and Methanol during periods that D-10 is venting to atmosphere and not to the T-10 oxidizer.
b. Hourly flow will be determined by using a differential pressure flowmeter.
c. Hourly HAP emission shall be calculated be multiplying by the HAP concentration determined that day by the hourly flow rates.
d Monthly HAP emission shall be calculated by summing the hourly HAP emissions.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
At least twelve months prior to the expiration date of this permit, the permittee shall perform a Reference Method 18 test or equivalent to determine Methanol and Methyl Chloride emissions.

4. Specific Monitoring Requirements:
a. The vent HAP composition shall be determined on a daily basis.
b. The vent flowrate. shall be determined on an hourly average basis.

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. HAP concentration recorded on the LIMS or PI system.
c. Hourly mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(16) D-10 PROCESS AREA:

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(17) R-10 PROCESS AREA:

-- (R10.01) R-10 Rearranger Scrubber (5284):
Type: Cocurrent Venturi Wet Scrubber
Scrubbing Liquid: Water

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride.

1. Operating Limitations:
Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

Compliance Demonstration Method:
Mass balance and scrubber control efficiency.

2. Emission Limitations:
Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:
None

4. Specific Monitoring Requirements:
Scrubber liquid flowrate..

5. Specific Recordkeeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. Date and time of changeout.
b. Water flowrate. through the scrubber.
c. Duration of the changeout.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions:
During bed changeouts, the scrubber shall be operated in accordance to manufacturer's specifications.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(18) F-2, F-5, F-6, AND L-2 PROCESS AREAS:

--	(F2.01) F-2 Process Vent:	Process Tank 4064
--	(F5.01) F-5 Reactor Vent:	Process Tank 2082 and Reactor 2080
	(F5.02) F-5 Process Vent:	Process Tank 2321
--	(F6.01) F-6 Process Vent:	Process Tanks 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2045, 2040
--	(L2.02) L-2 Process Vent:	Process Tank 7066

APPLICABLE REGULATIONS:

Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Formaldehyde from each of the affected facilities listed above.

1. Operating Limitations:

Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

Compliance Demonstration Method:

Historical testing and vent flow rates.

2. Emission Limitations:

Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall continuously monitor the flow rate of each of the vents listed above.

5. Specific Recordkeeping Requirements: N/A

6. Specific Reporting Requirements:

HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions: None.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(19) G-2 AND G-10 PROCESS AREAS:

-- (CR.01) Silicon Crusher:
Vented through bagfilter

-- (G2.04) G-2 Grinder (3361) and G-2 Classifier (3368)
Vented through Cyclone (3370) and Baghouse (3317) in series

-- (G2.05) G-2 Ground Silicon Bin, 3321:
Vented through Bagfilter (3375)

-- (G2.06) G-2 Ground Silicon Bin, 3322:
Vented through a Bagfilter (3377)

-- (G2.07) G-2 Sand Bin, (1615)
Vented through a Bagfilter (1615F)

-- (G10.03) G-10 Sand Bin, (5028)
Vented through a Bagfilter (5029)

-- (G10.04) G-10 Grinder (5009) and G-10 Classifier (5010):
Vented through Cyclone (5011) and Baghouse (5019)

-- (G10.05) G-10 Ground Silicon Bin, 5006:
Vented through Bagfilter (5033)

-- (G10.06) G-10 Ground Silicon Bin, 5007:
Vented through Bagfilter (5034)

APPLICABLE REGULATIONS:
Regulation 401 KAR 59:010 applies to the particulate and visible emissions from each of the affected facilities listed above (CR.01, G2.04, G2.05, G2.06, G2.07, G10.03, G10.04, G10.05, G10.06).

1. **Operating Limitations:** The particulate control devices (bagfilters, baghouses, and cyclones) on each of the affected facilities (crusher, bins, grinders, classifiers) listed above shall control particulate emissions and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the affected facilities are in use.

Compliance Demonstration Method: The permittee shall record the occurrence and duration of each incident when the affected facilities are in operation but the associated control devices are not.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(19) G-2 AND G-10 PROCESS AREAS: (Continued)

2. Emission Limitations:

a. For the Silicon Crusher (CR.01):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 32.37 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

b. For each of the following - G-2 Grinder and Classifier (G2.04), G-2 Ground Silicon Bin (G2.05), G-2 Ground Silicon Bin (G2.06):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 21.55 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

c. For the G-2 Sand Bin, 1615 (G2.07):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 17.19 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

d. For the G-10 Sand Bin, 5028 (G10.03):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 17.19 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

e. For each of the following: G-10 Grinder, 5009 and G-10 Classifier 5010 (G10.04), G-10 Ground Silicon Bin, 5006 (G10.05), G-10 Ground Silicon Bin, 5007 (G10.06):
   i. Pursuant to Regulation 401 KAR 59:010, Section 3(2), emissions of particulate matter shall not exceed 21.55 lb/hr.
   ii. Pursuant to Regulation 401 KAR 59:010, Section 3(1), the opacity of visible emissions shall not equal or exceed 20 percent.

f. For G10.03, G10.04, G10.05, and G10.06, see also **(23) Group Requirement 2 - Previous Synthetic Minors (PM_{10})**.

Compliance Demonstration Method:

a. Hourly Mass Emission Rate = [Hourly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]

b. Opacity Limit - During all periods of operation or malfunction of the baghouses, the permittee shall determine compliance through maintenance of the records required by Item e. under **5.(Specific Recordkeeping Requirements below)**.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(19) G-2 AND G-10 PROCESS AREAS: (Continued)

3. **Testing Requirements**: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**

a. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specification a monitoring device for the continuous measurement of the differential static pressure across each baghouse.

b. The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

5. **Specific Recordkeeping Requirements:**

The permittee shall maintain records of the following information:

a. Design and/or manufacturer specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).

b. The operational procedures and preventive maintenance records for each baghouses.

c. Continuous records of the pressure drop across each baghouse during all periods of operation.

d. Hourly records of the flowrate. (cfh) of air (or nitrogen) through each baghouse during all periods of operation.

e. During all periods of operation or malfunction of any of the baghouses, a daily (calendar day) log of the following information shall be kept:

   i. Whether any air emissions were visible from the hopper(s) associated with the baghouse(s) of concern.

   If visible emissions are observed, the permittee shall record the following information:

   ii. Whether the visible emissions were normal for the process.

   iii. The color of the emissions and whether the emissions were light or heavy.

   iv. The cause of the abnormal visible emissions.

   v. Any corrective actions taken.

6. **Specific Reporting Requirements**: None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

9. **Compliance Schedule:** None

10. **Compliance Certification Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(20) WASTEWATER TREATMENT PROCESS:

-- (W.01) 815 Sump Vent
-- (W.02) 824A/824B FS Units
-- (W.04) 925/926 Equalization Tanks
-- (W.23) 824C FSU Units Collection Tank
-- (W.05) 937 Air Stripper Vent

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride from the 815 Sump Vent.
b. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride, Methylene Chloride, Biphenyl, Toluene and Trichloroethylene from the FSU Units, Equalization Tanks, the FSU Unit Collection Tank and the Air Stripper.

1. Operating Limitations: Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

2. Emission Limitations:

Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

Compliance Demonstration Methods:

a. The permittee shall take wastewater samples daily and analyze for Methyl Chloride, Methylene Chloride, Biphenyl, Toluene and Trichloroethylene concentrations.
b. Hourly mass flowrates shall be determined by using Magflow flowmeters at all inlet streams and the outlet of the 925/926 Equalization Tanks.
c. Hourly HAP emission shall be calculated by multiplying the difference between the most recent inlet and outlet HAP concentrations by the daily flow rates.
d. Monthly HAP emissions shall be calculated by summing the daily HAP emissions.
e. For (W.01), the above procedures shall be followed only when the B2.03 scrubber is operational.

3. Testing Requirements:

Wastewater HAP concentration shall be performed using U.S. EPA standard or equivalent methods. Within six months of the issuance of this permit, the permittee shall submit a testing and QA/QC protocol to Division for Technical Services for review of the wastewater testing methodology. The Division of Technical Services may request additional information, split samples, certifications, etc. as required to determine appropriate testing methods.

4. Specific Monitoring Requirements:

a. Wastewater HAP concentrations shall be determined on a daily basis.
b. Wastewater flowrate. shall be determined on an hourly average basis.
c. For (W.01), the above shall be followed only when the B2.03 scrubber is operational.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(20) WASTEWATER TREATMENT PROCESS: (Continued)

5. Specific Record Keeping Requirements:

The permittee shall maintain up-to-date, readily accessible records of the following information:

a. Date and time of measurements.
b. Wastewater HAP concentration recorded on the LIMS or PI system.
c. Hourly wastewater mass flow data.
d. Periods of monitor downtime and the reason(s) for the downtime.
e. Corrections made in data prior to reporting and the reason(s) for the corrections.

6. Specific Reporting Requirements:

HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(21) WASTEWATER QUENCH AND FILTER PRESS PROCESSES:

-- (W.07) 866 By-Product Metal Quench Box
-- (W.08) 974 By-Product Metal Quench Tank
-- (W.22) 1012 By-Product Metal Quench Tank
-- (W.09) 883 DPR Quench Vessel
-- (W.10) DPR Quench Basin
- (W.13) 951/952 HP Units
-- (W.19) By-Product Metal Quench Basin

APPLICABLE REGULATIONS:

a. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride and Hexane from the following Emission Points - W.07, W.08 and W.22.

b. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Methyl Chloride and Methyl Ethyl Ketone from Emission Points DPR Vessel W.09, HP Units (W.13) and By-Product Metal Quench Basin (W.19).

c. Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Chloroform, Methyl Chloride, and Methyl Ethyl Ketone from the DPR Quench Basin (W.10).

1. Operating Limitations:

Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reductions Limits.

2. Emission Limitations:

Emissions of hazardous air pollutants shall comply with the Early Reductions Limits.

Compliance Demonstration Method:

a. For W.07, W.08 and W.22, emissions of Methanol and Methyl chloride shall be calculated as follows:
   i.. The permittee shall take and analyze samples of vent gas and analyze for Methyl Chloride and Hexane once monthly.
   ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
   iii. Batch HAP emissions shall be calculated be multiplying by the most recent HAP concentration by the batch displacement volume.
   iv. Monthly HAP emissions shall be calculated by summing the batch HAP emissions.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(21) WASTEWATER QUENCH AND FILTER PRESS PROCESSES: (Continued)

b. For W.09, emissions of Methyl Chloride and Methyl Ethyl Ketone shall be be calculated as follows.
   i. The permittee shall take quarterly samples of vent gas and analyze for Methyl Chloride and MEK .
   ii. The permittee shall supply valid engineering estimates of volume flow rate during batch operation.
   iii. Batch HAP emissions shall be calculated be multiplying by the most recent HAP concentration by the batch displacement volume.
   iv. Monthly HAP emissions shall be calculated by summing the batch HAP emissions.

c. For W.10, W.13, and W.19, emissions shall be based on historical sampling and historical flowrates.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Record Keeping Requirements:
The permittee shall maintain up-to-date, readily accessible records of the following information:
a. For W.07, W.08, W.09, and W.22:
   i. The number of batches processed.
   ii. The batch displacement volume.
   iii. The HAP concentration.
b. For W.10, W.13 and W.19:
   Records of the most recent flow rate and concentrations.

6. Specific Reporting Requirements:
HAP emissions shall be reported as described in the Early Reductions section.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(22) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC):

This section covers those groups of emission points that were permitting in the past as 'synthetic minors' for volatile organic compounds (VOC), i.e., with emission limits to preclude the applicability of PSD or Regulation 401 KAR 51:017 (40 CFR 52.21).

APPLICABLE REGULATIONS:

a. Permit C-88-068 issued April 28, 1988 covering the Namex expansion:

--	(A10.08)	Two 40,000 Gallon Primary Reactors, Distillation Column and Secondary Recovery
--	(A10.01)	Syltherm Boiler
--	(C10..01)	Hydrolysis Loop, 750 gal Reactor, Distillation Column, and a Compressor
--	(D10.01)	Two 33,000 Gallon MeCl Recovery Reactors, Distillation Column and MEVA Column
--	(R10.01)	By-Product Reactor
--	(T10.01)	Thermal Oxidizer (T-10)
--	(--)	Namex Process Equipment Leaks

b. Permit C-89-015 issued March 6, 1989 covering the Namex wastewater expansion:

--	(W.01)	815 Sump Vent
--	(W.02)	824A/824B FS Units
--	(W.03)	Tank 923
--	(W.04)	925/926 Equalization Tanks
--	(W.23)	824C FSU Units Collection Tank
--	(W.05)	937 Air Stripper Vent
--	(W.09)	883 DPR Quench Vessel

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(22) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

c. Permit C-91-155 issued covering the Methylchlorodisilane (MCDS) Project:

--	(--)	Feed Product Interchanger (3744)
--	(--)	Distillation Column (3740)
--	(--)	Bottoms Accumulator(3745)
--	(--)	New Pipeline Equipment: 30 Valves 65 Flanges
--	(B1.04)	B-1 MCDS Dowtherm A Condenser

1. Operating Limitations: None

2. Emission Limitations:
Each of the above construction projects shall have emissions of less than 40 tons per twelve month period (rolling average) of VOC to preclude applicability of PSD.

Compliance Demonstration Method:
The permittee shall maintain records, as required by 401 KAR 63:070, to demonstrate that emissions will be less than the significant emission rates specified in Regulation 401 KAR 51:017, Prevention of Significant Deterioration.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall maintain monthly records of VOC emissions from each of the three construction projects.

6. Specific Reporting Requirement:
Monthly VOC emissions shall be included in the permittee's semi-annual compliance certification.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(22) GROUP REQUIREMENT 1 - PREVIOUS SYNTHETIC MINORS (VOC): (Continued)

8. Alternate Operating Scenarios:
With the approval of the Administrator and the Director, compliance with the requirements of 401 KAR 51:017 shall be demonstrated by maintaining monthly records demonstrating compliance with a source-wide VOC emissions cap of 145 tons per rolling twelve-month period.

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(23) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}):
This section covers those groups of emission points that were permitting in the past as 'synthetic minors' for particulate matter (PM_{10}), i.e., with emission limits to preclude the applicability of PSD or Regulation 401 KAR 51:017 (40 CFR 52.21).

APPLICABLE REGULATIONS:
Permit C-88-068 issued April 28, 1988 covering the NAMEX expansion and including the following particulate emission sources:

-- (A10.02) A-10 Silicon/Sand Hoppers (5110, 5115)
Both hoppers vented through a single baghouse (5112)

-- (A10.03) A-10 Copper Hopper (5120)
Vented through bagfilter (5122)

-- (A10.04) A-10 Catalyst Hoppers (5118)
Vented through bagfilter (5119)

-- (A10.05) A-10 Silicon/Sand Hoppers: (5210, 5215)
Both hoppers vented through a single baghouse (5212)

-- (A10.06) A-10 Copper Hoppers (5220)
Vent through bagfilter (5122)

-- (A10.07) A-10 Catalyst Hoppers (5218)
Vented through bagfilter (5219)

-- (G10.01) G-10 Vacuum Pump (5024)
Vented through bagfilter

-- (G10.03) G-10 Sand Bin, (5028)
Vented through a bagfilter (5029)

-- (G10.04) G-10 Grinder (5009) and G-10 Classifier (5010):
Vented through cyclone (5011) and baghouse (5019)

-- (G10.05) G-10 Ground Silicon Bin, 5006:
Vented through bagfilter (5033)

-- (G10.06) G-10 Ground Silicon Bin, 5007:
Vented through bagfilter (5034)

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(23) GROUP REQUIREMENT 2 - PREVIOUS SYNTHETIC MINORS (PM_{10}): (Continued)

1. Operating Limitations: N/A

2. Emission Limitations:

Combined emissions of particulate matter (PM_{10}) from the affected facilities listed above shall not exceed 15 tons per twelve month period (rolling-average) to preclude applicability of PSD.

Compliance Demonstration Method:

a. The permittee shall maintain monthly records of particulate matter (PM_{10}) emissions from each of the affected facilities listed above to demonstrate that emissions will be less than the significant emission rates specified in Regulation 401 KAR 51:017, Prevention of Significant Deterioration.
b. Monthly emissions from each of the affected facilities above shall be calculated according to the following relation:

Monthly Mass Emission Rate = [Monthly air (or nitrogen) flowrate. through baghouse] x [Manufacturer-guaranteed grain loading]

3. Testing Requirements: None

4. Specific Monitoring Requirements:

The permittee shall monitor the hourly flowrate. (cfh) of air (or nitrogen) through each baghouse when the baghouse is in operation.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Design and/or manufacturer's specifications for each baghouse including manufacturer/vendor guaranteed outlet grain loading (gr/scf).
b. Monthly records of PM_{10} emissions from each of the affected facilities listed above.

6. Specific Reporting Requirement:

Monthly PM_{10} emissions shall be included in the permittee's semi-annual compliance certification.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(24) GROUP REQUIREMENT 3 - STATE AIR TOXICS:
These requirements cover those affected facilities that installed control technology or took voluntary limitations to avoid a BACT determination pursuant to 401 KAR 63:022 or a RACT determination pursuant to 401 KAR 63:021.

-- (W.14) Six (6) Filter Presses
One (1) Bagfilter
F-1007
Conveyor #1 - 999
Lump Breaker - 1000
Blower - B-1006

-- (W.15) Spent Bed Filter Press Storage Area:
Bucket Elevator - 1008
Conveyor #2 -1001
Conveyor #3 - 1009

1. Operating Limitations(State Origin only):
The material storage pile shall be enclosed on three sides up to a height of 12 feet and shall be roofed pursuant to 401 KAR 63:022 and 401 KAR 63:010, Fugitive emissions

2. Emission Limitations(State Origin only):
The source-wide emission rate of copper shall not exceed the Threshold Ambient Limit (TAL) for copper listed in 401 KAR 63:022.

3. Testing Requirements(State Origin only):
An analysis of the spent bed material shall be performed yearly to determine copper content.

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
a. The permittee shall maintain readily accessible records of the amount of solids handled and the copper concentration of the spent filter press material.
b. The permittee shall maintain appropriate calculations to insure that the TAL is not exceeded.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

The emission points listed below are part of the permittee's Early Reductions commitment and constitute the 'source' as defined in 40 CFR 63.73.

Emission Unit Description	ID#	KY EIS #
A-2 Vent Scrubber	24	
Pilot Plant Scrubber	30	
Pilot Air Scrubber	57	
Dowtherm A Vent Condenser	A1.05	
Dowtherm A Vent Condenser	A2.05	
A-2 Secondary Recovery	A2.06	
Analyzer Vent	A2.07	
A-10 Secondary Recovery	A10.08	
1236 Impurities Reactor	B1.01	
1237 Impurities Reactor	B1.02	
1289 Impurities Reactor	B1.03	
B-1 MCDS Dowtherm A Condenser	B1.04	
B-2/B-3 CCR Scrubber	B2.01	
B-2 Vent Scrubber	B2.03	
B-10 CCR Scrubber	B10.01	
B-10 Impurities Reactors	B10.03	
C-2 Process Venturi	C2.01	
C-2 Process Absorber	C2.02	
Fresh Heptane Tank 1543	C2.09	
Spent Heptane Tank 1542	C2.10	
C-3 Process Venturi	C3.01	
C-3 Process Absorber	C3.02	
Rearranger Venturi	C3.03	
C-10 Process Venturi	C10.01	
C-10 Process Absorber	C10.02	

Emission Unit Description	ID#	KY EIS #
Acid Pit Vent	C10.05	
D-1 MEVA Column	D1.01	
Methanol Tank 1520	D1.03	
Methanol Tank 1536	D1.04	
Waste Acid Tank 1483	D1.05	
D-10 MEVA Column	D10.01	
Methanol Tank 5915	D10.03	
Cooling Tower	D10.04	
F-2 Process Vent	F2.01	
F-5 Reactor Vent	F5.01	
F-5 Process Vent	F5.02	
F-6 Process Vent	F6.01	
Ethylene Glycol Tank 2458	F15.06	
Finishing Dowtherm A Vent Condenser	FIN.03	
Unleaded Gasoline Tank EQ009	GAS.01	
Diesel Fuel Tank EQ010	GAS.02	
L-2 Process Vent	L2.02	
Adsorbent Quenching	P1.03	
P-10 Adsorption System	P10.01	
R-10 Rearranger Scrubber	R10.01	
T-10 Thermal Oxidizer Unit	T10.01	
Fuel Oil #2 Tank 785	U.06	
Fuel Oil #6 Tank 3100	U.07	
Fuel Oil #6 Tank 790	U.08	
20% HCl Storage Tank	U.09	
815 Sump Vent	W.01	
824A/824B FSU's	W.02	
925/926 Equalization Tanks	W.04	
937 Air Stripper Vent	W.05	
866 By-product Metal Quench Box	W.07	

Emission Unit Description	ID#	KY EIS #
974 By-product Metal Quench Tank	W.08	
883 DPR Quench Vessel	W.09	
DPR Quench Basin	W.10	
951/952 HP Units	W.13	
By-product Metal Quench Basin	W.19	
By-product Metal Quench Tank 1012	W.22	
824C FSU Collection Tank	W.23	

APPLICABLE REGULATIONS:

In accordance with section 112(i)(5) of the Clean Air Act and 40 CFR 63, Subpart D (Early Reductions Rule), this permit grants each emission unit in the Early Reductions Source a 6 year extension from the compliance date of the otherwise applicable standard promulgated under section 112d of the Clean Air Act. In lieu of complying with applicable section 112(d) standards, the permittee accepts Alternative Emission Limitations, monitoring, recordkeeping, emission calculations, and reporting requirements for the Early Reductions Source.

The Alternative Emission Limitations shall be effective until six years after the compliance date for the last promulgated standard under section 112(d) of the Clean Air Act that is applicable to any emission unit in the Early Reductions Source. The Alternate Emission Limitations shall expire six years after the last applicable compliance date for all emission units in the existing source which shall comply with the standard promulgated under section 112(d) of the Clean Air Act.

1. **Operating Limitations:**
   Emissions of hazardous air pollutants (HAPs) shall comply with the Early Reduction Limits.

2. **Emission Limitations:**
   Pursuant to 40 CFR 63.73, the permittee has defined their Early Reduction Source as the entire existing facility except for Boilers, Indirect Heat Exchangers, and Pipeline Equipment. As an emission limit, the permittee has accepted the following limitation:

   30.3 Megagrams/calendar year of Total Gaseous Hazardous Air Pollutants
   30.3 Megagrams/calendar year of Weighted Gaseous Hazardous Air Pollutants

   Compliance with the Alternative Emission Limitations shall be determined on a calendar year basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

3. Testing Requirements:

In addition to any previously listed Specific Testing Requirements, pursuant to 40 CFR 63.74(g), Baseline Post-Reduction estimates shall be based on:

The best available data representing actual emissions for the purpose of establishing base year or post-reduction emissions under this section shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of 40 CFR 63, Appendix A. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for establishing base year or post-reduction emissions:

(1) No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;
(2) It is not technologically or economically feasible to perform source tests;
(3) It can be demonstrated to the satisfaction of the Division that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;
(4) For base year emission estimates only, the base year conditions no longer exist at an emission point in the source and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or
(5) The emissions from one or a set of emission points in the source are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

Twelve months prior to the renewal of this permit, the permittee shall resubmit an analysis of all HAP emission points to determine what testing will need to be performed before permit renewal.

4. Specific Monitoring Requirements:

See previous sections for individual Emission Points requirements.

5. Specific Recordkeeping Requirements:

a. Each emission unit included in the Early Reductions Source shall be uniquely identified with a tag, label or other markings consistent with the emission unit description or emission unit identification number.
b. The permittee shall keep records of calculations, used to determine HAP and weighted HAP emissions. The permittee shall retain all monitoring data and records, including supporting emissions calculations, for a period of 5 years from the date of monitoring, measurement, report, or application. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

c. In addition to monitoring emissions during normal operation, all periods of equipment malfunction shall be monitored. Records indicating the date and duration of each equipment malfunction shall be maintained.

6. Specific Reporting Requirements:

a. Total HAP emissions from the Early Reductions Source shall be reported semiannually. The report shall include emissions for each emission unit identified in the Source. The semi-annual reports shall be submitted to the Division on or before the 30th of each month following the end of a calendar half (January 30 and July 30). The first report shall be submitted on or before the 30th of the month following the end of the calendar half in which the permit is issued. The first report shall also include a complete set of **all** emission calculations. The complete set of calculations are not required to be submitted with subsequent reports, but the permittee shall include any changes in emission factors, control efficiencies or method of calculation. These reports shall include complete calculations for any new de minimis source that began operation during the reporting period. A de minimis source is one that has potential to emit less than uncontrolled ten (10) percent and controlled emissions less than one (1) percent of the source wide threshold.

b. All emissions resulting from equipment malfunctions shall also be reported. Malfunctions shall be identified, the cause of the malfunction , and what actions that the permittee undertook to minimize the emissions. The permittee shall continue to be responsible for meeting all requirements of 401 KAR 50:055 during periods of malfunction.

Emissions during periods of a malfunction shall be determined based on what they would have been had that a malfunction not occurred. During periods when monitoring data is missing or unavailable, emissions from continuous processes shall be reported as equivalent to the third highest daily average. For batch processes, the average emission rate may be used to estimate emissions.

7. Specific Control Equipment Operating Conditions:
See individual emission point listing.

8. Alternate Operating Scenarios: None

9. Compliance Schedule: None

10. Compliance Certification Requirements: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimus Emission Early Reductions Sources

The following Affected Facilities would be otherwise considered insignificant emission sources, except they are part of the Early Reduction Source and shall comply with the Alternative Emission Limitations, Record Keeping and Reporting.

EIS	Dow ID	Description
--	(A1.05)	A-1 Dowtherm A Vent Condenser (# 1164)
--	(A1.07)	A-1 Dowtherm G Vent Condenser (# 1179)
--	(A2.05)	A-2 Dowtherm A Vent Condenser (# 3518)
--	(B1.04)	B-1 MCDS Dowtherm A Condenser
--	(C2.05)	C-2 Dowtherm G Vent Condenser (1346)
--	(FIN.03)	Finishing Dowtherm A Vent Condenser (# 2159)

APPLICABLE REGULATION:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Biphenyl.

1. Compliance Demonstration Method:
Mass Balance.

2. Specific Recordkeeping Requirements:
a. The permittee shall record the number of periods of venting and volume of the Dowtherm condensers.
b. The permittee shall maintain a readily accessible MSDS for the Dowtherm fluid.

3. Alternate Operating Scenarios:
The permittee may use any heat transfer fluid. The permittee shall report a change in material in its Early Reduction reports.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimus Emission Early Reductions Sources (Continued)

-- (D1.06) Cooling Tower (15 gallons of Deerborn 865 is injected into the cooling water once per week. Deerborn 865 is 25% Ethylene Glycol)

-- (D10.04) D-10 Area Cooling Tower (15 gallons of Deerborn 865 is injected into the cooling water once per week. Deerborn 865 is 25% Ethylene Glycol)

APPLICABLE REGULATION:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Ethylene Glycol.

1. Compliance Demonstration Method:
Mass Balance

2. Specific Recordkeeping Requirements:
a. The permittee shall record the amounts of anti-fouling/scaling chemical added to the cooling water system.
b. The permittee shall maintain a readily accessible MSDS for cooling water additives.

3. Alternate Operating Scenarios:
The permittee may use any non-chromium cooling water additive. The permittee shall report a change in material in its Early Reduction reports.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimus Emission Early Reductions Sources (Continued)

EIS	Dow ID	Description	
--	(B1.01)	B-1 Impurities Reactor 1236	(Emissions during purging)
--	(B1.02)	B-1 Impurities Reactor 1237	(Emissions during purging)
--	(B1.03)	B-1 Impurities Reactor 1289	(Emissions during purging)
--	(B10.03)	B-10 Impurities Reactors (5370, 5380)	(Emissions during purging)
--	(B20.03)	B-20 Impurities Reactors (6470, 6480)	(Emissions during purging)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from each of the reactors listed above during maintenance.

1. **Compliance Demonstration Method:**
   The permittee shall demonstrate compliance by a mass balance across each of the reactors listed above.

2. **Specific Recordkeeping Requirements:**
   The permittee shall keep records of the number of reactor changeouts.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(25) GROUP REQUIREMENT 4 - EARLY REDUCTIONS REQUIREMENTS:

De minimus Emission Early Reductions Sources (Continued)

-- (P10.03) Adsorbent Quenching
-- (C10.05) Covered Acid Pit:
Vent with Blower (5576)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from the adsorber (P10.03) above during maintenance.
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to the emissions of Hydrogen Chloride from the Acid Pit Vent (C10.05).

1. Compliance Demonstration Method:

a. For P10.03 Absorbent Quenching, compliance shall be demonstrated by mass balance.
b. For C10.05 Acid Pit Vent, compliance shall be demonstrated by mass balance and estimated partial pressure.

2. Specific Recordkeeping Requirements:

a. For P10.03 Absorbent Quenching, the permittee shall a record of the amount of absorbent quenched.
b. For C10.05 Acid Pit Vent, the permittee shall keep records of the following information:
   i. Rated vent capacity.
   ii. Acid concentration.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 50:035, Section 5(4).

1. Storage Tanks - The following tanks qualify as insignificant activities and are exempt from Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) for one or more of the following reasons:
   a. They are not used to store any volatile organic liquids (VOLs) as defined in 40 CFR 60.11b (k);
   b. Have a capacity less than 40 cubic meters [40 CFR 60.110b (a) & (b)];
   c. Were constructed prior to July 23, 1984 and have never been reconstructed or modified since that date [40 CFR 60.110b (a)].

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
A10.09	5130	A10.09	5230	A10.09	5251
C3.04	3214	C3.05	3260	C2.06	1547
C10.03	5544	C10.06	5917	C10.07	5918
D-1 MEVA	1487	D-10 MEVA	5914	D1.02	1488
D10.02	5913	F1.01	2064	F1.02	2054
F1A.01	2189	F1.03	1521	F1.04	2714C
F1A.01	2189	F1A.02	2714A	F2.02	4015
F2.03	2019	F2.04	2056	F2.05	2210
F2.06	2211	F2.07	2212	F2.08	2213
F2.09	2214	F2.10	2215	F2.11	2216
F2.12	2219	F2.13	2220	F2.14	2221
F2.15	2222	F2.16	2223	F2.17	2225
F2.18	2229	F2.19	2242	F2.20	2243
F2.21	2705A	F2.22	2701A	F2.23	4166
F2.24	2278	F2.25	2035	F2.26	2016
F2.27	1548	F4.01	2005	F4.02	2007
F4.03	4000	F4.04	4001	F4.05	2705C
F4.06	2070	F5.03	2088	F5.04	2332
F5.05	2328	F5.06	2329	F5.07	2082
F9.01	2367	F9.01	2368	F9.01	2377
F9.01	/2387	F9.02	2227	F9.03	1538
F9.04	1539	F9.05	1537	F9.06	2700A

Dow Vent ID	Tank ID	Dow Vent ID	Tank ID	Dow Vent ID	Tank ID
F9.07	2701B	F9.08	2700C	F9.09	2705B
F9.10	2700B	F9.12	2714B	F9.13	2703A
F14.01	4140	F14.02	2703B	F15.01	2460
F15.02	2462	F15.03	2463	F15.04	2456
F15.05	2457	F15.06	2458	F15.07	2007A
F16.01	4102	F17.01	4300	F18.01	4357B
L1.01	2405	L1.02	2407	L1.03	2410
L2.03	7090	L2.03	7083	S10.01	5807
S10.01	5809	S10.01	5814	S10.01	5815
S10.03	5916	S10.04	5919	U.07	3100
U.09	710	U.08	790	W.12	888
W.21	940	W.21	941		

2. Furnaces:
   (C2.08) Struthers-Wells, Corp., Model 6CV 15-6, C2-DTG Vaporizer
   5.93 mmBTU/hr (Natural Gas fired only)
   Applicable Regulation: 401 KAR 61:015

   (FIN.01) 3201 Eclipse Vaporizer, 4000MVDOWZB-G-PRO, FIA Dowtherm Vaporizer
   9.7 mmBTU/hr (Natural Gas fired only)
   Applicable Regulation: 401 KAR 59:015

   (L2.01) 2211 Radco, Inc., Horizontal Syltherm Heater
   5.0 mmBTU/hr (Natural Gas fired only)
   Applicable Regulation: 401 KAR 59:015

3. A-1 Process Area:
   (A1.04 & A1.08) A-1 Catalyst Hoppers - 1082, 1087
   Vented directly to the atmosphere
   Applicable Regulation - 401 KAR 59:010

   (A1.03 & A1.06) A-1 Copper Hopper - 1084, 1101
   Must vented through bagfilters 1084F, 1101F to remain insignificant
   Applicable Regulation - 401 KAR 59:010
4. A-2 Process Area:
   (A2.03) A-2 Copper Hopper - 3508
   Must vent through bagfilter 3508 to remain insignificant
   Applicable Regulation - 401 KAR 59:010
   (A2.04) A-2 Catalyst Hopper: 3516
   Vented directly to the atmosphere
   Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

5. A-10 Process Area:
   (A10.04 & A10.07) A-10 Catalyst Hoppers: 5118, 5218
   Must vent through bagfilters 5119, 5219 to remain insignificant
   Applicable Regulation - 401 KAR 59:010

   (A10.03 & A10.06) A-10 Copper Hoppers: 5120, 5220
   Must vent through bagfilters 5122, 5222 to remain insignificant
   Applicable Regulation - 401 KAR 59:010

6. B-2/B-3 Process Area:
   (B2.02) B-2/B-3 Vac-U-Max Loader (5394)
   Must vent through two filters in series to remain insignificant
   Applicable Regulation - 401 KAR 59:010

7. B-10 Process Area:
   (B10.02) B-10 CCR Vac-U-Max Loader (5394)
   Must vent through two filters in series to remain insignificant
   Applicable Regulation - 401 KAR 59:010

   (B10.06) B-10 Me CCR Vac-U-Max Loader
   Must vent through two filters in series to remain insignificant
   Applicable Regulation - 401 KAR 59:010

8. B-20 Process Area:
   (B20.02) B-20 CCR Vac-U-Max Loader (5394)
   Must vent through two filters in series to remain insignificant
   Applicable Regulation - 401 KAR 59:010

9. R-10 Process Area:
   (R10.02) R-10 Rearranger Vac-U-Max Loader (5286)
   Must vent through two filters in series to remain insignificant
   Applicable Regulation - 401 KAR 59:010

10. C-2 Process Area:
    (C2.04) C-2 Rearranger Vac-U-Max Loader (5394)
    Must vent through two filters in series to remain insignificant
    Applicable Regulation - 401 KAR 59:010

11. C-3 Process Area:
    (C3.04) 3214 Process Vessel, 2700 gallons
    (C3.05) 3260 Process Vessel, 3000 gallons

12. C-10 Process Area:
    (C10.09) C-10 Rearranger Vac-U-Max Loader
    Must vent through two filters in series to remain insignificant
    Applicable Regulation - 401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

13. Finishing Area:

(FIN.02) Finishing Dust Collection System Baghouse (2122):
Must vent through baghouse to remain insignificant
Applicable Regulation - 401 KAR 59:010

14. L-1 Process Area:

(L1.04) 009-2211 MIS Dust Collector
Building 2211 Vibrating Screen Filter must vent through dust collector to remain insignificant
Applicable Regulation - 401 KAR 59:010

15. G-2 and G-10 Process Areas:

(G2.01) G-2 Vacuum Pump, 3344
Must vent through Bagfilter 3345 to remain insignificant
Applicable Regulation - 401 KAR 59:010

(G2.02) G-2 Silicon Lump Bin (3305):
Must vent through Bagfilter (FLT1-3305) to remain insignificant.

(G2.03) G-2 Silicon Lump Bin (3306):
Must vented through Bagfilter (FLT1-3306) to remain insignificant.
Applicable Regulation - 401 KAR 59:010

(G10.01) G-10 Vacuum Pump, 5024
Must vent through Bagfilter 5024 to remain insignificant
Applicable Regulation - 401 KAR 59:010

(G10.02) G-10 Silicon Lump Bins (5003, 5004)
Must vented through Bagfilter (5031) to remain insignificant
Applicable Regulation - 401 KAR 59:010

16. Miscellaneous Sources:

(SHOP.01) Olcott Parts Washer (Model GOC 3860)
Roof Ventilator
15 HP Pump

17. S-10 and F-9 Process Areas:

(S10.01) S-10 Splitter System Vent:
Equipped with Condenser 5826

(S10.02) S-10 Materials Loader:
Vented through Filter Unit 5844
Applicable Regulation - 40 KAR 59:010

(F9.01) F-9 Splitter System Vent:
Equipped with Condenser 2386

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

18. P-10 Process Area:
    (P10.02) P-10 Adsorbent Loading and Unloading:
    Vented through Filter Unit
    Applicable Regulation - 40 KAR 59:010

19. Wastewater Treatment Process:
    (W.06) 934 Limestone Contactor Vent
    Must vent through Bagfilter 934 to remain insignificant
    Applicable Regulation - 401 KAR 59:010

20. Wastewater Quench and Filter Press Processes:
    (W.06) Limestone Contractor Vent:
    Vented through bagfilter
    Applicable Regulation 401 KAR 59:010

    (W.11) 802 Lime Silo:
    Vented through bagfilter
    Applicable Regulation - 401 KAR 59:010

    (W.17) P1-1003 Vacuum Pump:
    Seal Oil Evaporation

    (W.18) 1002 Process Tank, 1000 gallons
    Hydraulic Solvent Storage

    (W.20) 869 Lime Slaker Roof Vent
    Applicable Regulation - 401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

Not applicable.

SECTION E - CONTROL EQUIPMENT CONDITIONS

1. Pursuant to 401 KAR 50:012, Section 1(1) and 401 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the cabinet which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained at the source authorized by this permit for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality.

3. The permittee shall allow the Cabinet or authorized representatives to perform the following:
   a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
   b. Have access to and copy, at reasonable times, any records required by the permit:
      i. During normal office hours, and
      ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency; and
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

5. Reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be reported to the Division's Florence Regional Office no later than the six-month anniversary date of this permit and every six months thereafter during the life of this permit, unless otherwise stated in this permit. Data from the continuous emission and opacity monitors shall be reported to the Director in accordance with the requirements of Regulation 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of Regulation 401 KAR 50:035, Permits. All deviations from permit requirements shall be clearly identified in the reports.

6. In accordance with Regulation 401 KAR 50:055, Section 1, the owner or operator shall notify the Division for Air Quality's Florence Regional Office by telephone as promptly as possible any deviation from permit requirements, including those due to malfunctions, unplanned shutdowns, ensuing startups, or upset conditions. Pursuant to Regulation 401 KAR 50:035, Section 7(1)(e), the notification shall describe the probable cause of the deviations and corrective actions or preventive measures taken.

7. The permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date to the Division for Air Quality's Florence Regional Office and the U.S. EPA in accordance with the following requirements:
   a. Identification of each term or condition of the permit that is the basis of the certification;
   b. The compliance status regarding each term or condition of the permit;
   c. Whether compliance was continuous or intermittent; and
   d. The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).
   e. Other facts the Division may require to determine the compliance status of the source; and
   f. The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date.

8. In accordance with Regulation 401 KAR 50:035, Section 23, the permittee shall report all information necessary to determine its subject emissions.

9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1(1), results of performance test shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL CONDITIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state regulation 401 KAR 50:035, Permits, Section 7(3)(d) and is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to Regulation 401 KAR 50:035, Section 12(2)(c);
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the Division, in writing, information that the Division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit.

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority. The permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the source after the date a complete permit application was submitted but prior to the release of the draft permit.

SECTION G - GENERAL CONDITIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit.

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance.

8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6).

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance.

11. This permit shall not convey property rights or exclusive privileges.

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

15 Permit Shield: Except as provided in State Regulation 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of Regulation 401 KAR 50:035, Section 15.

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

(d) Construction, Start-Up, and Initial Compliance Certification Requirements

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up; and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Florence Regional Office in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to State Regulation 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the Division upon a satisfactory request showing that an extension is justified.

4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.

SECTION G - GENERAL CONDITIONS (CONTINUED)

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with Regulation 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Conditions G(d) 6. of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Pursuant to Section VII 2.2.(1) of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:0016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   i. An emergency occurred and the permittee can identify the cause of the emergency;
   ii. The permitted facility was at the time being properly operated;
   iii. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   iv. The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e), and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken. This requirement does not relieve the source of any other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition G(f)1. above are in addition to any emergency or upset provision(s) contained in an applicable requirement.

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall:
   a. Submit a Risk Management Plan to U.S.EPA, Region IV with a copy to this Division and comply with the Risk Management Program by June 21, 1999 or a later date specified by the U.S.EPA.
   b. Submit additional relevant information if requested by the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not applicable.

SECTION I - COMPLIANCE SCHEDULE

This section contains compliance schedule requirements as required by Kentucky Regulation 50:035, Permits, Section 7(2)(a). Progress reports on this schedule must be submitted at least semiannually, or at more frequent intervals if required in the specific conditions outlined below. Reports shall include the following items: (a) Dates scheduled for achieving each milestone, and the actual date that compliance is achieved; and (b) An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted to ensure that compliance with future items will be brought back on schedule.

1. Emission Point U.11: For the 767 boiler:
   a. Within 60 days after achieving the maximum firing rate, but no later than 180 days after initial startup of the 767 Boiler, the permittee shall conduct performance testing for nitrogen oxides as required by Regulation 40 CFR 60.45b (e).
   b. Within 60 days after achieving the maximum firing rate for fuel oil #2, the permittee shall conduct performance testing for particulate matter and visible emissions as required by Regulation 401 KAR 59:015, Section 8 (1).

   Emission Point P10.01: For the P-10 Pressure Swing Absorber:
   a. Within 30 days after the issuance of the permit, the permittee, pursuant to 40 CFR 60.663(e) and 40 CFR 60.703(e) shall provide to the Administrator of the U.S. Environmental Protection Agency (EPA) information describing the operation of the P-10 Adsorber and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.
   b. Within 180 days of approval of a monitoring plan by the Administrator, the permittee shall perform the following or equivalent performance test:
      i. Method 18, 25 or equivalent to determine the concentration of TOC in the Adsorber outlet and inlet.
      ii. Method 2, 2A, 2B, 2C or 2D, as appropriate to determine flowrate
   c. At least 30 days prior to the date of the required performance tests for the P-10 Adsorber, the permittee shall complete and return a Compliance Test Protocol (Form DEP6027) to the Division's Frankfort Central Office. The protocol form shall be used by the Division to determine if a pretest meeting is required. The Division shall be notified of the actual test date at least 10 days prior to the tests.

SECTION I - COMPLIANCE SCHEDULE (CONTINUED)

2. Compliance with the terms and conditions of this Section shall be certified annually on the permit anniversary date, to the Division for Air Quality and to the U. S. EPA when compliance has been achieved. The compliance certification shall include the following:
   a. The identification of the permit term or condition in this Section that is the basis of the certification;
   b. The compliance status;
   c. Whether compliance is continuous or intermittent; and,
   d. The method used for determining the compliance status, currently and over the reporting period pursuant to Regulation 50:035, Section 7(1)(c),(d), and (e).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS

As specified in 401 KAR 50:035, Section 8(1), compliance with the conditions of this permit shall be deemed compliance with applicable requirements that are included and are specifically identified in this permit, as of the date of permit issuance. Furthermore, pursuant to 401 KAR 50:035, Section 8(1)(b), the cabinet has determined that the requirements listed in this section are not applicable to the source. This section is not intended to exclude the source from exemption from other applicable requirements.

Pursuant to 401 KAR 50:035, Section 8(3), nothing in this permit shall alter or affect:

(a) 42 USC 7603 (emergency orders, Section 303 of the Act), including the authority of the U.S. EPA in that section;
(b) The liability of the owner or operator of a source for violation of applicable requirements prior to or at the time of permit issuance; or
(c) The ability of U.S. EPA to obtain information from the source pursuant to 42 USC 7414 (Section 114 of the Act).

a. New source performance standards:
   1. Regulation 40 CFR 60 Subpart E, Standards of Performance for Incinerators - The provisions of this Subpart only apply to incinerators with a charging rate of more than 45 metric tons of solid waste per day. The permittee does not operate any such incinerators and is exempt from this standard.
   2. Regulation 401 KAR 60:110 & 60:111 (40 CFR 60 Subpart K & Ka), Standards of Performance for Storage Vessels for Petroleum Liquids - Both these regulations apply only to petroleum liquid storage tanks that are greater than 40,000 gallons in capacity. Both the permittee's gasoline tanks are less than 40,000 gallons in capacity. Fuel Oils #2 and #6 are specifically exempt from the definition of petroleum liquids, so the fuel oil storage tanks are also exempt from these regulations.
   3. Regulation 401 KAR 60:560 (40 CFR 60 Subpart DDD), Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry - This regulation only applies to facilities that produce polypropylene, polyethylene, polystyrene, or polyethylene terephthalate. The permittee does not produce any of these polymers and exempt from this standard.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS

a. New source performance standards: (continued)
   4. Regulation 40 CFR 60 Subpart OOO. Source has capacities, as defined in 40 CFR 60.671, of 23 megagrams per hour (25 tons per hour) or less;
   5. Regulation 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills - The permittee does not operate any municipal solid waste landfills on-site and is exempt from this standard.

b. NESHAPS:
   1. Regulation 401 KAR 57:035 (40 CFR 61 Subpart V), National Emission Standards for Equipment Leaks (Fugitive Emission Sources) - The permittee is exempt from this regulation because the permittee does not operate any equipment in volatile hazardous air pollutant (VHAP) service as defined in this regulation.

c. NESHAPS for Source Categories:
   1. Regulation 401 KAR 63:190 (40 CFR 63 Subpart I), National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks - This regulation only applies to facilities that produce one or more of the products listed. The permittee does not produce any of the products listed as an intermediate or for sale, is not a pharmaceutical producer and is exempt from this regulation.
   2. Regulation 401 KAR 63:400 (40 CFR 63 Subpart Q), National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers - This regulation does not apply because the permittee does not use any chromium-based water treatment chemicals for the cooling towers on-site.
   3. Regulation 401 KAR 63:460 (40 CFR 63 Subpart T), National Emission Standards for Halogenated Solvent Cleaning - This regulation does not apply because the permittee does not use any of the listed chemicals as a solvent in parts washers
   4. Regulation 40 CFR 63 Subpart Y, National Emission Standards for Marine Tank Vessel Loading Operations - The permittee only unloads material from its barge unloading facility and is exempt from this standard.
   5. Regulation 40 CFR 63 Subpart DD, National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations - This regulation applies to facilities receiving off-site waste for treatment that contains greater than 500 ppm of hazardous air pollutants. The permittee does not receive off-site wastes in excess of this threshold and exempt from this regulation.